Fendler & Gray

1st letter July 25/48 St. Louis appealing for aid pitiful: his bro obliged to enlist in the army

2. Nov 27 48 St. Louis proposing & arguing for trip to Panama & thence to Cal. for self & bro to collect.

3. 8/11/53 Memphis agreeing to proposal of Dr. Gray & exchange his books for plants speaking of numerous sets Santa Fe plants in Europe get unsorted.

4. 10/23/53 Memphis books rec'd. & about collecting.

5. 12/3/53 N. York looking for vessel for Laguira.

6. Colonia Tovar 12/16/54 gives acc of voyage from N.Y. to Porto Rico & La Guayra & thence land journey to Caracas (30 miles in 5 hours) where remained 6 weeks & collected. Then bought a small farm with pardum & cottage for 47 *! temperature *! See whole letter

6a 11/25/55 Colonia Tovar. Speaks of Miss Phil. C. Morris & her friends Alderson & rev of ferns &c collected Mr. Moritz! Mr. Lang! Mr. Curtis (fungi) Dr. Engelmann. subscribers still scarce! See whole letter

7 Philad Apr 14/56 Relates leaving Cambridge & stopping at N.Y. meets Dr. Torrey & Prof Henry who gives him a Barometer which breaks! Sees Mr. Desmond & others in Philad

8 4/25/56 Philad. See Miss Morris

9 4/26/56 Gets barometer exchanged & views & money from Dr. Torrey & makes preparations to return to Venezuela

State Board of Health,

SECRETARY'S OFFICE,

Wilmington, N. C., March 16th 1885

Mr. Wm. M. Canby:

Dear Sir:

I enclose a few specimens of Partonia which Mr. McCarthy thinks sufficiently unlike B. verna to be a distinct species. Will you please give me your opinion when you find it convenient.

Yours very truly

J. D. Hood,

10 Colonia Mex 1/12/57 merely all his plants already seed by
Dr. G. a good deal of general information - need again
11 Colonia Mex 7/1/57 information about drafts. also as
to number of specimens collected. much interesting description
in this letter
11A Baltimore Oct. 18. 1858.
12 Baltimore 10/23/58 speaks of going at once to St. Louis
13 St. Louis 12/3/58 gloomy. health very bad bad cold.
13A " " 1/3/59
14 " 2/11/59 speaks of selling sets of his ferns to
D.C. Eaton &c ~~of sending Palm leaves~~ & complains of Dr. Lind-
ley ~~sending~~ only 4 £. for 200 Orchidaceae.
15 St. Louis 3/27/59 still complaining of Dr. Lindley's remit-
tance speaks of the 500 sps. of ferns & Lycopods sent
D.C. Eaton
16 St. Louis 11/2/59 no ans
17 12/11/59 sends pt to Prof. Gray
18 2/15 60 set aside: an interest longing to man
received by Dr. Gray asking him about California
19 10/8 60 no ans
20 11/9 60 Employed by Mr. Shaw asks for seeds of
Pendlera refused.
21 5/9/61 no ans still at Shaws
22 8/12 61 reflecting on the civil war
23 8/11 62 sends seeds acknowledges pamphlets
24 6/2/63 speaks of going into peach orchard big
still at Mr. Shaws at 60 per week
25 10/28/63 still complaining of Shaw & still looking
out for land - now in Ill.
26 11/10/63 Leaving Mr. Shaw in quiet dont remember fam

Wilmington March 17th 1885

J. T. Lance Esq

Dear Sir,

Unless there is some way by which we can consciously join hands and causes with Mr. Parnell I fear ~~with~~ we

27 St. Louis 2/7/64 gives a d° of purchase of 33 acres woodland at Allenton Ills.

28. St. L. 3/5-64 - Declines offer & go to Cambridge

29 Allenton 3/20/64

30 " 6/9/64 accepts Dr. Gray's offer of curator at Harvard

31 " 6/23/64 Dr. Gray lets him off & he then declines

32 " 6/5/65 another similar offer from Dr Gray & information desired.

33 " 6/21/65 again accepts curatorship

34 " 6/28/65 Offer somewhat changed & again declined

35 " 7/9/65 Offer again changed to $30. & pr mo & travel bagging & free & accepted

36 " 3/15/66 Has evidently been sent but has returned & becomes a correspondent of Decne

37. " 4/2/66 Receives Dr Gray & Torrey's pictures

38 " 8/24 66 gives results of theorizing on leaves of Compass plant !!

39 " 10/5/66 Wiz

39A " 4/17/67

40 " 10/28/67 a good deal of Nat. Philosophy & some details of fruit raising!

41 " 12/13/69 Praises & views his Cosmical researches & views!!

42 " 1/7/70 Still about his ideas which it is evident took Dr. Gray & Prof. Henry considerable instruction

43 Wilmington 7/23/74 gives an age of his setting out in Mexico & going to Germany & return, & then about getting his book published & some Delaware items.

44 Die - 10/18/74 Defends his book & is willing to wait.

45 " 6/15/75 Still as above

46 " 7/28/76 compares Notaea & Podophyllum & speaks of collecting in Trinidad!

47. " 10/28/76 Still talking of Trinidad - has sold lemon but not his books - eyesight better

Wilmington, Del., Oct., 1883.

The last payment for the building of

Rodney Street Chapel

being now due to the Contractors, the subscribers to the BUILDING FUND are ernestly requested to pay at once the full amount of their Subscriptions to Mr. Wm. M. CANBY, No. 730 Market Street.

GEORGE W. BUSH,

Chairman.

48 Wilmington 1/26/77 Sends a few books - asks for information & advice - concerning insect fertilization and Sandlip apples in Nicaragua

49 " 5/6/77 Has been very sick - accompanies leaving for N.Y. in 10 days -

50 Port of Spain 6/17/77 describes his arrival & impressions, gives letter like one to me

57 " 9/20/77 brings number of ferns collected & other information as to temperature &c much as in letters to me

51A " " " 11/24/77

52 " 4/26/78 brings acc of shipment of 50 sets of ferns and then the familiar acc of the search for counterfeit money by police

53 " 6/25/78 silence on the counterfeiting occasion

54 " 8/26/78 Principally speaking of ferns & orchids the latter few

55 " 10/6/78 not of much account but does not like Dr. Gray's opinion that Glaucium of Mexicana flowering plants will not do.

56 " 11/25/78 acknowledges receipt of drafts & speaks of collecting lycopods

57 " 4/24/79 Writes to Sir Joseph Hooker about Phanerogamous plants & is making further researches.

End

58 Port of Spain. 10/22/79

59 " " " 5/26/80

60 " " " 6/9/80

61 " " " 8/5/80

62 " " " 6/1/81

63 " 2/25/82.

Wilmington, Del., Oct., 1883.

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GEORGE W. BUSH,

Chairman.

Fendler's Santa Fe plants collected 1847

Fendler's own set		valued at $100.00		
×	No 1. Lowell	51.20	paid in advance July 1846	$150.00
×	2. Hooker	49.40		
×	3. Greene	46.60	paid in advance July 1846	50.00
	4. Sullivant	44.20	paid " " "	50.00
×	5. Olney (at formerly divided to Cleaveland)	42.20	" July 1848 by Gray	42.20
×	6 Tuckerman	39.90	" Aug " by Gray	39.90
×	7. J. T Carey	38.60	" " " by Gray	38.60
	8. E Durand	36.70	" " "	36.70
×	9. Fielding	34.60	" " " by Gray	34.60
×	10 Lindley	33.60		
×	11. Webb	33.10		
×	12 British Museum	32.20		
×	13 Harvey (formerly Oakes)	31.20		
	14 Mead	29.90	paid in April 1848	29.90
	15 Shuttleworth	28.90		
×	16 Taylor (Taylor)	28.20		
	17 Short	27.20	paid in April 1848	27.20
×	18 Gray & Torrey	26.00	paid in July 1848 by Gray	26.00
×	19. Cleaveland (formerly Olney)	25.40	paid Aug. 1848 by Gray	25.40
×	20	25.10		
×	21	24.50	sent to	
×	22	23.60		
×	23	22.90	England	
×	24	22.20		
×	25	21.50		

The sets marked × have gone through Prof Gray's hands.

× 26		sent to Boston, Gray	$ 20.80
× 27			20.50
× 28			20.00
× 29			19.10
30.	A Braun		18.60
31	Given away by Fenille		
32		sent to Subscribers in Germany.	17.60
33			17.10
34			16.60
35			16.40
36			15.80
37			15.20
38			14.80
39			14.50
40			14.20
41			14.00
42			13.60
× 43	Mr Lowell		13.30
× 44			13.00
× 45			12.60
× 46			12.30
× 47			11.80
× 48.			11.20
49			10.80
50			10.80

$ 74.20 see set No. 1.

Mosses $ 40. Lichens $ 10 Seeds $ 10, insects $ 27.50 = $ 87.50

Dr. Engelmann Dr.

July 13th. 1848	Remitted check for	$78.00
Aug. 2nd "	Check 38.00 pd. J. Carey .62 do	38.62
" 16th "	Check	100.00
Oct. 3rd "	To 1/2 of charges on box from St. Louis (Lowell)	3.00
Jan. 21st. 1849	Remitted from Tuckerman $10.00 Cleveland $27.00	37.00
Feb. 16th. "	" on Tr. Tuckerman & W. W. Taylor	60.40
March 10th. "	" Lindley	32.16
Mar. 5th. "	To portion of charges on box from St. Louis containing Fendler's private set	3.00
" 7th. "	To freight on said set sent to Robt. Brown pd. to Liverpool	3.50
		355.68
	Paid Amer. Acad. set of Memoirs	7.00
		362.68
Aug. 28	Remitted Thos. T. Kinnan of New York	70.68
		$433.60

Those abroad I will have me receive

I have 2 sets on hand making $33.00

The set taken by me to send to Bentham $20.00
Dec 3. 1849

On return from Spanish [illegible]

Fendler's Santa Fe Collections consigned to A. Gray.

E. Tuckerman —	$ 39.90	paid to A. Gray	$ 49.90
Lichenes —	10.00		
Oakes taken by Harvey	31.20	" "	33.70
Algae —	2.50		
Mr. Rugg	42.20	" "	42.20
Mr. Lowell } paid in advance			
Mr Greene }			
S. F. Carey (their J. Carey)	38.60	" "	38.60
Prof. Cleaveland —	25.40	" "	25.40
S. J. Carey (taken by self)	26.00	" "	26.00
Hooker —	49.40	" "	49.40
Webb	33.10	still unpaid	
G. W. Taylor —	28.20	" "	28.20
British museum —	32.20	" "	32.20
Lindley —	33.60	" "	32.15
Fielding —	34.60	" "	34.60
A. Gray set sent Lederour	20.80	" "	20.80
Smithsonian Inst. —	20.50	Advanced by A. G.	20.50
			$ 433.66

6 sets in Howard's hands

Still unaccounted for (viz 20 & 25) 26.00
" 25.40
" 24.50
" 23.60
" 23.00
" 22.30

Fendler's own set to Brit. Museum yet unaccounted for
6 sets (43–48) delivered to Lowell to balance his account
Now in my hands 1 set 200 sp. 20.00
" " " 191 " 19.10

Answered Aug 3d.
Enclosing check on
C. River Bank
for $100 as advance

St. Louis, Mo. July 25: 1848.

Dear Sir!

I have been very happy to learn from Dr. Engelmann that you were pleased with those specimens of my Santa Fe plants which have come to your hands. By your kindness and through your instrumentality I was enabled to start on my journey to Santa Fe in 1846.

I also learned that you have expressed a desire to see me on a second expedition of this kind, but which desire I could not yet comply with from certain considerations.

Not the dangers, nor the risk of life, health, or property; no! the many hardships and privations which are inseparably connected with such an undertaking are deterring me from entering upon it again; — on the contrary these botanical excursions are enough to make me passionately fond of herbarizing.

It is rather the experience I have had since, which is of such a nature as to operate very unfavorably upon my mind. The noncompliance with my repeated most fervent requests through Dr. Engelmann for an advance of some money is also not much calculated to encourage me to a similar enterprise.

When my pecuniary means at Santa Fe were nearly all exhausted, when I had to sacrifice one thing after another of my most necessary effects, to keep up a few days longer the scanty support of our lives, in order to collect something more of the vegetation of that region; I looked forward with the utmost confidence to those gentlemen in the East, who had induced me to go out to Santa Fe, and who would as I hoped, have sent me money without assistance as soon as I should have returned with my collections to ~~Santa F~~ St. Louis. It was this hope that made me bear all the difficulties most cheerfully, under the happy impression that the enjoyment of the fruits of my labour would soon compensate for all.

But alas! it was to be otherwise.

When I came back to St. Louis I had to assort about 17,000 plants, and to put them up in sets ready to be sent away. With this kind of work I was occupied till the beginning of April, during which time I could do nothing else to earn any thing to pay my current expenses, and I was therefore obliged to borrow money to keep from starving. Dr. Engelmann had been on such occasions so good as to advance little sums which amounted now to about 80 Dollars (all that he was able to do).

My brother who had accompanied me on my journey and assisted me as much as it was in his power, now found himself likewise sadly disappointed and was for want of money obliged to enlist in the army.

In regard to myself I also find how little I have gained after all by engaging in this botanical enterprise. By it I have expended about 200 Dollars of my own money; by it I gave up a business in which I was doing well, and in which I cannot at present engage again for want of means. To this may be added the sad prospect I have now before me, that by the time I shall receive some money, this money will be nearly all wanted to pay my debts which I had to contract during all this time.

I have now endeavoured to show how I am situated here, how I am anxiously waiting day after day and week after week for some glad tidings from you; and I believe that these my simple statements will be sufficient to enlist your good will in my behalf.

Very respectfully
Your Obt. Servant

Augustus Fendler.

Professor Asa Gray

Harvard University

Cambridge Mass.

6 U 7 A
JUL 26 10

Gray Herbarium
Harvard University

St. Louis, Mo. November 27th 1848.

Dear Sir!

About a month ago I returned from a tour in the country where I had been in search of a place to settle down. Although I had found such a place to suit me, yet before I could conform to the idea of moving to it for good, and of subduing forever my wandering propensities, I once more concluded to consult Dr. Engelmann about the practicability of a favourite-plan, which I still cherished.

This plan was to go this winter as soon as possible to the isthmus of Panama, to spend there three or four months in botanizing and thence to go to California next spring for the same purpose that I had went to New-Mexico.

Dr. Engelmann (as I anticipated), tried to dissuade me from doing this, and advised me to stay here all winter and to go out next spring to Santa Fe again, from where I could easily go afterwards to California. He also told me that he was not authorized to advance money for any other route than that of New Mexico and promised to inquire of you, in what manner I could be aided in this undertaking, especially about the situation you had alluded to in your letter some time since. On this I acquiesced at that time.

[illegible] giving this subject a more thorough investigation afterwards, I found various reasons that made me prefer my first [illegible], I intimated this to Dr. Engelmann, who told me that he would ask you, whether the advance-money could be granted for the purpose of going to California; and at the same time he thought it would be best that I should write to you also, and ask your advice about it.

In doing so, allow me Dear Sir to enumerate a few motives that influenced me in my choice.

1st If I conclude to go to Santa Fe, I would have to wait here till the month of May 1849 (nearly half a year, before I could engage again in a botanical enterprise.

2d. The two months of May and June would be taken up in travelling to Santa Fe; I therefore could [illegible] the time, that I was to commence earning anything, from about the 1st of July, and lasting for only 2½ months till middle of September, and then there was that long and dreary winter.

3dly I have learned since, that the country of New-Mexico has become very unsafe and dangerous for travelling. The more accessible parts of the neighbourhood of ~~the~~ Santa Fe I have ransacked already, and they will hardly yield enough to pay another year's expenses.

4thly I do not think, that I ever could find an opportunity at Santa Fe, to go to California, encumbered, as I have to be, with a great deal of luggage and paper.

5thly The costs of transportation from San Francisco to Boston or New York by sea are only about $1,25 per hundred-weight, while they are $8,00 per hundred weight from Santa Fe to Independence.

I also think that by the rapid settlement of some parts of California I shall be able to collect in regions hitherto but little explored, while the longer summer-season of that country will also be in my favour.

I have now stated what I am willing to do, if I can get the encouragement, which you offered me so kindly for a similar undertaking to New Mexico. I [illegible] I should not find much difficulty in getting a vessel at New Orleans for Chagres. But between Panama and San Francisco there will ply, (as far as I can learn through the newspapers) only one Government-Steamer; and therefore I fear that the chances for embarkation at Panama are rather rare. But I have no doubt that, (if it can be done at all), your influence could procure me a free passage for myself and baggage from Panama to San Francisco. My brother would also be glad to accompany me in the capacity of an assistant. [illegible] his aid and by the advance of 300 Dollars as also by the arrangement of quarterly payments to me through some mercantile house in California I believe that I could get along for as many years as may be required to make a thorough botanical exploration of that country, and that I could send in return rich and well preserved collections of rare plants.

If you approve of my plan, I would also request you to let me know, how many sets of Central-American plants I would likely be able to sell. In travelling I don't like to be encumbered by that set of Santa Fe plants, which I have prepared and made up with the utmost care for my own use, and although I shall part with it most reluctantly, I am nevertheless obliged to sell it.

It contains about 900 choice specimens, many of these in numbers sufficient to count for 2 or 3. [illegible] made me a condensed little herbarium [illegible] ents, but so that I [illegible] recognize the species. They are all [illegible] together in [illegible] which will be very convenient [illegible] to carry about me.

The sooner you can assist me in accomplishing my intended journey, the more I shall be indebted to you.

I remain

Yours most respectfully

Augustus Fendler.

Gray Herbarium
Harvard University

Memorandum of Wardian Plants.

British Museum	34 dollars @ 4/3	7-4-6
Mr Watson Taylor	29 " 20	6-4-0
		13-8-6
Freight paid by Sir W. Hooker		18-0
		12-10-6

Paid to Mrs B. Sept 22. 1849 J.B.

3 3,60
3 2,16
1,45

Washington D.C.
April 30th 1851

Memorandum for Robert

In July 1846 at the request of Col. Mackay U.S.A. I furnished Mr. Augustus Fendler, Botanist, with a team, wagon &c to prosecute his journey to Santa Fé — in company, I believe with Dr. George Engelmann, who was recommended to the notice and assistance of Genl. Kearny, by the Secretary of War, upon the application of Prof. Asa Gray — of Yale College (Amherst or Harvard), ✕ The articles furnished Mr. Fendler, have been charged to me, in the Treasury Dept. and I shall be compelled to pay for them, unless I can produce evidence that they were authorized by the Secretary of War, or that they were subsequently, approved

to some officer of the Quartermasters Dept. and if such evidence can be produced, I would thank Mr. Fendler or both Gentlemen, to forward it to me at New Orleans, or if neither of these gentlemen are now residents of New Haven, to inform me of their whereabouts, in order that I may communicate with them, upon the subject. — As the foregoing property belonged to the United States, it is probable, these gentlemen, may be able to show a Receipt for it, from some officer, Mr. Fendler, having receipted to me for it — But if this cannot be produced, some letter or evidence, that they were permitted, to use the property, will be sufficient.

I should wish to be informed as early as practicable, upon these points, —

R E Colony
Capt. U. S. A
New Orleans

Memorandum for
Robert to be
attended to in
New Haven

Memphis, August 11th, 1853.

Professor Asa Gray M.D.

Dear Sir

The perusal of your kind favor of the 25th July, which reached me yesterday, gave me much pleasure.

Your liberal proposal in regard to the exchange of some of your botanical works for a set of my Santa Fé plants and some Memphis plants is not only highly satisfactory to me, but will induce me to exert myself a little more than usually in searching through the environs of Memphis. The oppressive and enormous heat which we have had for the greater part of this summer made me stay in town more than I intended. But I hope to be in possession of a tolerable good collection of Memphis plants by the 1st of November and will be very much pleased to send you the best specimens that I can find. The copy of the new part of Plantæ Wrightianæ will be indeed a treat to me.

I am also glad that you directed my attention to A. Candolle's Prodromus, and it would be extremely gratifying to me if you could arrange an exchange with De Candolle in the way you indicated in your letter. If those of my plants that remain in England would (amongst which seem to be a set containing 236 and another one-

215 specimens of Santa Fe plants) will not be sufficient to obtain the above work, perhaps those which are (I think) in Dr. Engelmann) in Berlin with Professor Braun, out of which you may dispose as you think proper, would help to effect the object in view.

Dr. Engelmann has sent to Germany eleven sets of my Santa Fe plants (or twenty 1877 specimens, of which 289 sp. were intended for Mr. Shuttleworth. For all these I have received nothing at all yet, I neither know what has become of them; but if they are with Professor Braun, there would be a good opportunity for an exchange in valuable books equally agreeable to me if written in the German language or treating on tropical vegetation, especially as I intend to go to Laguayra and Caraccas in December next, if I keep my health. Until very recently I thought it perhaps possible for me to hold out at Memphis, but I find now that my business has suffered so much from the effects of the Gas Company, and that it is of no use to swim against the current.

My principal object in going to Caraccas is: ~~going~~ to go into a business again, by which I can support myself. But I hope I shall have plenty of leisure to make botanical collections besides. If I collect again I shall aim to make the sets as large and complete as possible. Do you think 15 sets each containing from 1000-1500 species of plants collected about Caraccas could meet with a ready sale?

I did not know that there was already a 4th edition of your Bot. Text Book, which as the latest one I would prefer to the 3d.

There is an agent of Adams & Co's Express here in Memphis; the office of that line in Boston is, as I am told, 84 Washington street, but I could find out nothing about their charges.

Yours very Respectfully and truly

S. Feistel

[redacted]

Gray Herbarium
Harvard University

Memphis, Octbr. 23d, 1853.

Professor Asa Gray M.D
Harvard University

Your several favors of the 31st Aug.; 26 Septbr. & 3d Octbr. have reached me in due time. The package containing the books came to hand but yesterday and has been detained no doubt by the low stage of water in the Ohio river. I had been anxiously waiting for them, and you may easily imagine with what eagerness I opened the package and looked over the books. I am very glad indeed that you were so kind as to send also "Lindley's Vegetable Kingdom", which will be the very book I shall need in a tropical country. Please make yourself paid for this book out of any money (remitted for my collections) that may happen to be with you and if there is none let me know in what way, most satisfactorily to you I may pay my debt.

Although since my letter of the 11 August I have been collecting a pretty large number of Memphis plants, yet I was on account of bilious fever and subsequent debility unable to collect

Gray Herbarium
Harvard University

quite as many as I desired to do. As I am now in possession of your Flora of North America I shall proceed at once with selecting such species for you as I think will prove most acceptable. If you wish me to send them on direct to you or to the care of Doctor Engelmann, who may have an opportunity to forward them together with some other plants he may have for you. This would perhaps be the best way.

I am under many ~~obligations~~ obligations to you for your kindness in sending those valuable books. I will write again as soon as I send the plants, and remain

Respectfully and truly Yours

W. C. Bindler.

Professor Asa Gray

Harvard University

Cambridge

Mass

New York, Decr 3d, 1853.

Professor Asa Gray, M.D.

Dear Sir

I left Memphis on the 16th ult: and reached New York on the 24th. Since then I have been waiting here for a vessel to go to Laguayra. There is none at present bound to that port from New York, and I may yet have to go either to Philadelphia or Baltimore if no vessel is to be had here. The little box containing the Memphis plants for you will be probably here in a day or two, when I shall send them on immediately.

Respectfully yours

D. Fendler.

Gray Herbarium
Harvard University

Colonia Tovar [illegible], Decbr. 16th, 1854.

[illegible]

Dear Sir

I wrote to you on the [illegible] Sept. 3d, 53 informing you that [illegible]

[illegible] Philadelphia, another but indirect route [illegible]

[illegible]

[illegible] commenced [illegible] boarding in the Capital of Venezuela was rather to expensive for me and after a stay of 6 weeks I went up [illegible] Tovar, a German settlement about 35 miles [illegible] situated in high [illegible] valley [illegible] of the valley is [illegible] above the sea and [illegible] feet higher. [illegible] valley [illegible] with the people [illegible] Germans. [illegible] Tovar [illegible] the valley [illegible] [illegible] rivulets [illegible] [illegible] impossible.

At [illegible] in a valley like this finds here every peculiarities of vegetation, surface and climate [illegible] is [illegible] of the [illegible] perpetual peace; for we have altered the [illegible] given to the terrs, the "Terra homicida de los hidalgos". There is no scorching summer's heat; no fearful winter's cold, neither tornadoes to devastate the country nor gales to blind the inhabitants with sand and dust or penetrate their clothes [illegible] and [illegible] harmless, thunders merely grumbling.

All the meteorological observations I was enabled to make consisted only in taking the temperature 5 times a day, paying some attention to the course of the clouds. [illegible] 65.[illegible] — 65.[illegible] — 65.[illegible] — highest 65.[illegible] — lowest 65.50 — Mean 63.[illegible] — Very seldom the temperature gets as low as 50°F. and yet more rarely it rises to 78°. — These 2 degrees 50° and 78°F. seem to be the limits which are never exceeded in the eight months that I have made observations. The common [illegible] ranges between 56° and 70°. [illegible] told that [illegible] rivulets to every [illegible] the soil. [illegible] who is with me plants small patches of [illegible] called [illegible] the soil of the cultivated grounds has once been [illegible] when first cleared (6 years ago) of its dense forest; [illegible] numerous rains which sometimes fall very heavily have at last washed away the fertilizing substances [illegible] vegetation is very [illegible] generally with vegetables in the [illegible] which in the rainy [illegible] to the usual length of stalk and [illegible] few grains in each ear. [illegible] by fire about 18 months [illegible] time nothing remained of it but [illegible] and a few branches. [illegible] appearance [illegible] remaining except [illegible]

Gray Herbarium
Harvard University

[illegible] is to be found in abundance [illegible] like from here. The [illegible] a few days [illegible] in great abundance during [illegible] this [illegible] year; [illegible] the [illegible] leaf.

[illegible] 6 species of [illegible] species. [illegible] and [illegible] are represented only by [illegible] species.

[illegible]

[illegible] C. Newcomb.

Colonia Tovar, Novbr: 25th, 1855.

Professor Asa Gray M.D.
Harvard University

Dear Sir

It was with feelings of unusual pleasure that I received your letter of August 1st, and I will not conceal that those parts of it which relate to your fair friend Miss Elisabeth C. Morris and her recommendation were peculiarly gratifying to me and calculated to cheer my spirits in a solitude in which I hold companionship with almost nothing but trees, and shrubs and flowers, and where the exciting din and roar of an uninterrupted line of cascades is the only music that I can listen to, and the infinitely variegated fall of the rushing and leaping mountain-stream my most exalting spectacle.

About 4 weeks ago I had to go to Caracas on some business, and on this occasion I was so free as to pay a visit to Mr. Alderson's house which is at Savanna grande, half an hour's ride from Caracas. I found neither Mr. Alderson nor his son but two accomplished ladies his daughters who received me with much kindness; and on my leaving after an hour's conversation, in which they evinced a lively interest about the welfare of the Colony they invited me to call again whenever I should come to Caracas. The little letter you sent me I delivered undirected and wish that you would be so good as to present my best respects and my thanks to Miss Elisabeth

C. Morris for her kind efforts in my behalf.

It also gives me great pleasure that you kindly offer to afford every aid in respect to the distribution of my plants, and I have therefore written this day to Mr. Bolton of Caracas who is connected with the house of Dallet Broth.s, Philadelphia and who may give me the desired information about the best way and time of forwarding my collections to you.

The ferns as well as the polypetalous section of the flowering plants I have already distributed into sets, and I think of sending them to Caracas with the first opportunity. I shall write again to you more fully and explanatory about them when they are packed and sent off. The present letter is chiefly written to make you acquainted with my intentions of sending the collections as soon as possible, that you may be enabled to correspond or to publish something to that account and secure me ~~10~~ from 10 - 13 subscribers in time, because Mr. Moritz who is still here has some time ago commenced again to collect ferns, which he intends to send at an early date to Germany (I think to Berlin). I have seen Moritz's own set of his former collections, when he used to travel about the greater part of Venezuela viz. the Orinoco, the mountains of Merida, Caenana, Caripe and a great many other regions; but the number of all his species of ferns will hardly exceed 250 or 260, while I have already 314, of which at least 290 are collected at the Colony or from 4 - 8 miles around it. There are several regions not far off, where I never ~~g~~ have been and which promise a very rich harvest of new species.

I think I could augment the number of species considerably and discover many more new ones if I am sure that they find a market on which I may rely. I am therefore anxious to secure subscribers for them; so that I need not fear competition, and then I shall go at it with renewed vigour; and if my life and health be spared I think of bringing together a rather complete representation of the vegetation of this and other parts of Venezuela. When I came here, Moritz seemed rather surprised that I should go at collecting plants in a place which he thought of being thoroughly ransacked, and he said that it would be a hard matter to find any new species. He seems however to have altered his opinion in this respect, after I had been in the field for some time, for I showed him many a plant which was new to him.

Of flowering plants I have about 1850 species, although my search after these may be called but a superficial one. I think from 800 - 1000 more species might be collected and of ferns perhaps from 80 - 100 more.

From Dr. Engelmann I have received letters but from Mr. Cary not one word. I would be very glad and thankful to you, if you could find out any thing about the cause of Mr. Cary's silence.

In regard to Mr. Curtis's wish, I regret to say that since the receipt of his letter I have been principally occupied with arranging my plants and distributing them into sets, so that for want of time I could make only a few excursions and therefore could not enlarge much the collection of fungi which I had made previous. I went however at once to the work of arranging and enumerating the greater part of them and came as far as fungus

No. 237. when I found that it was absolutely necessary to dispose of my ferns as soon as possible and therefore neglected all other things for the present. As soon as I have time again to make excursions I shall pay the proper attention to fungi also, and hope of enlarging my collections of them considerably. Mr. Curtis says in his letter: „If you will intrust such a collection to me, I will see to their publication and distribution, some sets will be taken in this country and more in Europe." And in another place: „You can rely upon my doing as well by your collections and as favorably to yourself, as can be done by any one." These sentences seem to indicate nothing certain about the time of remittance, and I conclude that he will first publish and distribute them. But as I do not know how long this may take, I would rather sell the collection to Mr. Curtis in the same manner as I have done with my Santa Fé Mosses, Hepaticae & Lichens. An early remittance after receipt of the fungi would be very desirable to me the more so as my whole income for the last 2 years since I left Memphis does not amount to one Dollar.

I have also a collection of Coleopterous for Mr Leconte if he desires them. Also a considerable quantity of mosses and Lichens which I have not yet arranged.

So soon as you shall inform me that a certain number of subscribers will be sure to me, so soon shall I go with renewed ardour at collecting; on the information of the contrary I shall be obliged to go at some other business to make a living. Dr Engelmann wrote to me that he will be subscriber to one set. Your kind offer to aid in the distribution of my collections is so valuable to me that I shall not only be thankful to you in words but shall also try to be thankful otherwise; and if you will accept of one set of my plants as a token of my respect and gratitude towards you, you will afford me a great pleasure in doing so.

Cholera has been visiting Venezuela in the months of August, September and October. It took its victims chiefly from among the poorer classes of inhabitants, especially the negroes. Of foreigners very few were attacked, and the Colony on account of its elevated situation was left untouched by this wandering disease.

Yours
very respectfully

A. Fendler.

Gray Herbarium
Harvard University

Philadelphia, April 4th, 1856.

Dear Sir

After leaving your hospitable roof I arrived at New York early next morning and went to Mr. Putnam as soon as the stores were opened, delivered your letter and the little blocks and made a choice of 3 books viz: 2 vols of Wöhler's annals of science and 1 vol: Boussingault's Rural Oeconomy. The bill I send you enclosed in this letter. In the same day I visited Dr. Torrey and found Prof: Henry with him, who gave me an order to Mr. Green of New York for 1 barometer and a dry and wet bulb thermometer. Mr. H. Green showed me a barometer which he said I should have. I told him that he might get every thing ready by Saturday morning April 12th, On that day I was to start for Philadelphia, and to be sure that the barometer might not be handled by any body else but by Mr. Green and myself I left it with Mr. Green to the very latest moment. When that moment arrived and I went to receive the barometer, Mr. Green told me that he was going to give me another one which was very different in appearance from the one he had shown me at first. The reason for making this change he said was, that the scale for reading off, extended farther in the one he gave me now, and

that with the one he had offered me first I could not make use of on mountains above 4000 feet high. I did not examine the instrument; he enclosed it in a white wooden ~~box~~ case. In order to secure it still more from breaking I paid him 5 dollars out of my own pocket for a stiff leather case in which he packed the whole.

As soon as he handed the barometer over to me I took the utmost care in carrying it. I went straight on to the ferry-boat and from there to the Railroad cars never allowing it for one single moment to rest on the floor while the cars were in motion, but holding it in my hands in such a way as to obviate any sudden jerks. If it had been suspended in elastic springs it could not have been safer. As soon as I had reached the house in Philadelphia where I intended to stay I opened the leather case and then the wooden one; but what was my surprise and grief to find that the glass tube of the barometer was broken, after all the utmost exertions that were in my power to prevent such an event. If all the barometers of Mr. Green are as fragile as the one he gave me, he should tell his customers before hand, that they cannot be ~~taken by~~ carried by railroad. I have this day written to Prof: Henry as well as to Mr. Green to inform them of what has happened.

To day I visited Mr. James who took me to Mr. Durand. Mr. Durand went with me to the Academy introduced me to some of the Gentlemen there and showed me the collections of Natural History &c. He is a very cheerful and obliging old gentlemen. Dr. Le Conte I found not at home. None of Messrs. Dallet Brothers' ships have as yet arrived but they expect one to be in very soon. If you have any thing for me before I should have Philadelphia please send to Mr. James.

I cannot but express again my most hartfelt thanks to Mrs. Gray and yourself for the kind and hospitable entertainment at your house. May health and happiness smile upon you at all times.

Respectfully Yours

N. Fendler

You may direct to
N. Fendler
207. St. John St.:
Philadelphia.

Professor

Asa Gray M. D.

Harvard University

Cambridge

Mass

Gray Herbarium
Harvard University

Philadelphia, April 25th, 1856.

Professor Asa Gray M.D.

Dear Sir

I received your favour of the 22d inst. and am glad to see that you have sold one of the small sets of ferns. I wish Doctor Engelmann would send the promised money before I leave Philadelphia. I have received no answer yet from Prof. Henry. The price of Boussingault's Economy is I think $1.50 from which 20 p.c. to be deducted as with the other books would leave $1.20.

A vessel has arrived here day before yesterday from Venezuela and will be ready to sail for La Guayra probably within 8 or 9 days.

If you send the money by mail please have the envelope of the letter ~~fast~~ pretty well fastened with paste, for the envelope of your last letter opened rather too readily.

I shall write again before leaving Philadelphia. Yesterday I paid a visit to Miss Morris of Germantown and was very kindly received.

Yours very respectfully

A. Fendler.

(4)

Professor

Asa Gray

Harvard University

Cambridge

Mass.

Gray Herbarium
Harvard University

Philadelphia, April 26th 1856.

Professor Asa Gray M.D.

Dear Sir

For the last 6 or 7 days I have been busy in getting the rectifyer for my copper still made, and in buying many little articles to take with me, and as you did not mention any thing about letters sent to Mr James in your last letter I did not go to see him during all this time until today, when I was agreeably surprised by a number of letters for me sent to his care. Mr. James did not know the number of the street I live in, and therefore was unable to send them to me. There was your favour of April 15th with check from Dr Engelmann for 125 Dollars, also a letter from Dr. Engelmann, one from Dr: J. Le Conte, one from Rev: Mr. Curtis and a Memorandum from Dr. Wyman.

Today I also received a letter from Prof: Henry of Washington city. informing me that Mr. Green of N. York will exchange the broken barometer and send me a sound one. I sent the broken one to him to day.

The vessel for La Guayra will not leave here before Saturday next.

Yours very Respectfully

N. Fendler.

Professor Asa Gray M. D.

Harvard University

Cambridge

Mass.

Cedar Grove, January 2, 1857.

Professor
Asa Gray, LL.D.

Dear Sir

Your kind and very welcome letter of October 31st together with that of Dr. Engelmann was received by me on Christmas day.

I am very glad to hear that you have finally recovered your health, although rather at a great sacrifice of time.

I should be very much pleased to be in receipt of your letter at monthly intervals (which I conjecture are already diminished) as well as Dr. Engelmann's occasional. But the day of writing and receiving letters is so long troublesome and wastefull of time, so much taken up in literary and scientific labours that I have no spare time even to get read newspapers, so that I do not know what is going on in this world, and who has been elected President of the United States. After the course of time I should remove to Cincinnati or nearer to some place convenient for outward communication. I stand in happy to receive of your kindness some portion matter of information and study.

I have told the Rev. Dr. Curtis that I am satisfied with ~~without~~ the additional pay of 10 dl. he means to give me, and that I intend to collect specimens of Fungi as well as other plants.

As to the desiderata by Dr. Sinnar I can do very little, for the animals specified are very rare here, especially in the Cocoon. I will with the exception of some birds, not of the poorest counties for a hunter.

My collection of Lichens is not very large yet, for I do not know what species and how many specimens of each I may. Nothwithstanding the already received from me, and I fear I shall collect too many if I again collect indiscriminately.

But with regard to Mosses & Hepaticae I can say, that I have more than a whole box full (one of those sized boxes) I brought with me to the States. I have made an attempt to separate and classify them some time since, when I distinguished and enumerated over 80 species

of them, although it may not get through with most of the packages. I found it rather a vexatious piece of work to make constantly use of the microscope. But I hope it will save Mr. Cuthbert a great deal of time and labour, if I can all separate them before sending them on. I trust that many new things are amongst them, for I have noticed several already, which I had not found previously.

It is now 13 months, since I informed you of having 844 species of ferns in my collection, and that I thought from 80 to 100 more could probably be collected in Venezuela. And now it is with a peculiar pleasure that I can say I have already 404 species. How many more there are to be collected, I shall not try to conjecture. In one excursion to the valleys of Aragua as far as Maracay and thence over the mountains — to within a mile of the sea-shore at Choroni I collected alone 46 species new to me, amongst which are some very fine and curious looking ones.

The number of flowering plants, which I have collected since my return from the States is also considerable. The greater part of these I have already compared and enumerated, and amongst them I found 200 species new to me, so that my numbers reach now up to 1941. Amongst those that are not yet compared I hope to find also a considerable number of new ones. The most of these plants I have collected in the lower country, about Victoria, 1700 feet above the sea. Leguminosae and Malvaceae are the predominant orders in this part of the country, while they are very rare at the Colony. You can easily imagine how much I have to exercise my faculty of comparison, not to mingle and mix up the different species amongst such a mass of vegetation.

We have had an extraordinary wet season. 6/1/54 day. 143 were rainy days. The dry season has now fairly set in since about four day and I hasten therefore not to lose any time for collecting. There are several regions that may be interesting to a botanist, which I mean to visit this season. Before I send you another lot of plants I shall endeavour to collect some more, so that it may be worth while to send.

If I do not furnish you this time with any meteorological observations it is only to save time in writing.

Still on the subject of meteorology, I will mention that I have received yesterday a letter from Prof. Henry in which he seems to be pleased with my communication to him, which he says will be published as a part of the appendix in the next report of the Institution to Congress. He is going to send me one more standard thermometer, a rain-gauge, a copy of the last report of the regents to Congress and a memoir on the archaeology of the U. States. When I wrote my communication to Prof. Henry I had no idea that they would be published, and I have therefore written them only in my ordinary manner of composition with no view to publicity.

Prof. Henry's letter was dated on the same day with yours but arrived here 15 days later. It had gone through the dead letter office. I have sent him under yesterday's date a whole package of meteorological observations for 4 months.

I also to Miss Fletcher I shall write today or tomorrow and also to Miss E. Harris.

Since the date of my last letter to you I have been putting up my distilling apparatus to make fuel-gas; but scarcely had I finished it and was ready to commence operations, as the price of whisky — or rather rum — rose to such a height that it would have been a losing business to go into it. I was obliged to lean back altogether upon fishing as the only support, feeble as it is.

A few days ago I visited a high mountain region where I encamped all night, and where I found a heavy white frost in the morning coating all the low herbs and grasses, so that their stiffened leaves broke like glass beneath one's feet. This white frost is said to be common here in January and February, and yet — the stately asparagus on the neighbouring heights with its polished stems of 70-80 feet, rears uninjured its slender form and its cap-adorned head high above all other trees.

In this place, on a wet and hardy plant grows a white violet, No. 3 of my collection, which was in full bloom all over the flat and wet grounds. This little plant, I think, must be night perhaps endure the climate of Boston. Enclosed I send its seeds. Gray some seeds of it. My best respects and all good wishes to me.

I remain respectfully and truly yours

M. Wendler.

P. S.

Caracas January 17th 1857

Today I spoke to Mr. Boulton of Caracas, who advised me in regard to remittance that it would be best if you paid the money over to Messrs Dallet Brothers, and as soon as they advised Boulton, Sons & Co. of La Guayra of it, the latter house would pay it to me.

A. Fendler

Gray Herbarium
Harvard University

Colonia Tovar July 1st, 1857

Professor
Asa Gray M.D.

Dear Sir

Both your very welcome letters of Febr. 20th and of March 9th have been received, the former in due time, but the latter one only three weeks ago. What's your letter of March 9th was sent by the mail steamer, and in that case I am very glad that you have done so. For if you had sent it in the usual way it would perhaps never have reached me. In explaining this, it will be necessary for me to state, that under date of March 5th Professor Henry sent me a letter through Dallett Brothers in which he informed me that he had sent by this house Eight pounds of mercury for my barometer and a small package of papers. This letter I did not receive as usually through the Post office. It was brought to me from Caracas by a Colonial and had a cut of 3½ inches in length in its envelope so as to allow its contents to be taken out and put back again conveniently. On making inquiry I learned, that my letter had this cut already when it came to Caracas. I had previously written to Messrs Boulton, Sons & Co of La Guayra and had informed them, that I expected soon to receive 200 Dollars from you, and some mercury from Prof. Henry, and I begged them to inform me of the arrival of the money as soon as possible. But I received not a single line from Boulton, Sons & Co in answer to my letter. The mercury I received after cards from a merchant in Caracas.

On the 6th of June your letter of Febr. 20th came by post office and informed me that you had remitted a draft on Messrs Dallett Brothers. Waiting in vain for information on this point from Messrs Boulton, Sons & Co I was

obliged to go to La Guayra myself, arrived there on the 19th. Time and received the 200 Dollars. But it was a market stuck with the question directed to me by the head clerk or partner (who receives and pays out the money and seems to be well informed about the whole mercantile business of the house) whether I was in possession of a letter informing me that the money had been sent already? This question together with the cut in Prof. Henry's letter and the silence about the arrival of the money was sufficient for me to guess at the whole affair, and on receiving the money I therefore made no further inquiry about the cut in the letter nor any thing else.

Before I say anything more I hasten to thank you very much for the money you have sent me and your encouraging letters. It is certainly a great source of pleasure to a naturalist who works not merely for the sake of pecuniary remuneration, to find that some worthy and highly esteemed men take an interest in his labors and by their approbation urge him on to follow his thorny path, (here and there strewed with flowers). They form a pleasant contrast to the surrounding crowd of selfish arrogant individuals, who instead of assisting the progress of science seek to take advantage of its votaries wherever they can, to gratify their own avaric passion of money-making.

From the above you see that it is rather a difficult matter here to get remittances in due time. Even if I should have occasion in future to draw on you the merchants here are opposed to buy drafts of private individuals.

Since my last letter to you (January 15), I have made several excursions of from 4 to 14 days, and have crossed the principal mountain chain in three different places. One from Maracai to Columbia to the very margin of the sea; the other from Valencia to San Estevan within 3 miles of Puerto Cabello; the third from Tinaquire to within a few miles of the sea-shore. The two first regions are West, the third one East of Caracas. Besides these I have made a number of minor excursions into the neighbouring valleys. Of plants I have now 489 species and of Phaenogamous plants 2541, total 3030 species, besides mosses, hepaticae, lichens and fungi. The months of February and May happened to be the wettest months of the whole year since we arrived here and interfered considerably with my labors in the field. But still I have reason to be satisfied with the harvest I have made in the few months that were favorable.

The more I attempt to explore these regions the more am I convinced, that a great deal remains yet to be done with regard to discovering and making known the plants of this country. These extensive ranges of mountains with their innumerable recesses and deep ravines, covered with the densest growth of primeval forest uninterrupted for more than 150 miles from East to West, have been in most places never been traversed by civilized men. – When standing on some high mountain-peak and looking over a part of this Territory, it needs no great power of imagination to be filled with a longing and an ardent desire to embark ~~in enterprises~~ in enterprises even of the most perilous kinds, in order to penetrate the unknown abysses and to bring to light the hidden treasures of vegetation. And when in such moments I compare my strength and my fast waning pecuniary means, which forbid to hire a Companion to help me carry the burden, then I feel somewhat akin to depression of mind, which prompts me to leave the spot and retrace my steps homewards.

In coming to a new country it is at first comparatively easy to make a living by collecting plants; for the collector can make use of all the different species that meet his eye, and can carry them home without the aid of other hired persons or beasts of burden. But after he has

explored the neighbourhood and is obliged to make extensive excursions of from 8 – 14 days or 3 weeks, the case is different, and he soon finds that his earnings do not come up to his expenses.

Whenever I was engaged in scientific pursuits for any length of time I was soon obliged to go to work at some other more profitable business, although that business might not be in accordance with my inclinations. And now I find again that the little capital, which I had earned at Memphis during three years by distilling camphene, is rapidly vanishing, notwithstanding the most frugal mode of living. I am therefore under necessity to try my hand for a while at something else besides collecting plants, and have already commenced to make experiments in brewing beer and making brandy; and shall be obliged, (with regret do I say it), to spend most of my time behind the still.

By no means do I wish by the preceding lines to convey to you the idea, that I am discouraged or that I have given up collecting plants. As long as strength and life and a few spare dollars remain with me I shall continue to do all I can for my favorite pursuit; and even now, whenever time and circumstances allow me to do so, I shall do it with the same zeal as I have done heretofore.

Under date of January 12th I have sent a letter to Sir William Hooker, but have not yet received an answer. From Dr. Engelmann I have no news at all.

I think I can augment my collections a little more before sending them on to you.

In travelling from Victoria towards Valencia, I've found about 3 miles West of Turmero right in the middle of the road the famous "Zamang", an enormous tree so well described by Alex: v. Humboldt. Its head, formed by enormous horizontal branches is the most remarkable part of this giant of trees. A vertical section of its head would represent this shape

Gray Herbarium
Harvard University

I measured the head in its greatest diameter from ESE to WNW most carefully and found it to be 206 feet 11 inches Engl. — Fifty seven years ago it was found by A. v. Humboldt to measure in its greatest diameter 192 feet French measure, which would be equal to 204,48 feet Engl. Hence it follows, that this tree has within the last 57 years increased the horizontal diameter of its head only by 2 feet 5 inches Engl. The branches are loaded with a wonderful mass of epiphytes and parasites, and it seems surprising that branches of nearly a 100 feet in length, standing horizontally out from the trunk can support for centuries besides their own astonishing weight such an extra load of heavy plants as: Bromeliaceae, Orchideae, Cacteae, Loranthaceae, Piperaceae &c.

This extraordinary tree is but thinly covered with leaves, it looks as if it lacks vigour to issue new slender branchlets; for its ultimate branchlets are old, short, thick and of slow growth.

Setting out from Petaquire, a place nearly as high as the Colony), on February 8th, in an excursion towards the sea-coast my attention was directed to some cow trees. The space over which they were distributed was but very limited in the direction N. and S, but extended more towards East and West, and was about 3500 feet above the sea. Their external appearance the shape of the trunk and leaves agreed exactly with the description given by A. v. Humboldt. Most of them were trees of 1 to 1½ feet in diameter but very tall. In 7 or 8 of these trees of different age and dimensions I made incisions to see the milk flow. Although it was about the same season of the year when Humboldt saw the cow-tree between Valencia and Puerto Cabello, I never could elicit from them much more than 1 or 2 drops in a second of time. There was not much difference in the flow of milk between the larger and smaller trees, and if ever I was disappointed in my expectations, it certainly was on this occasion as to the quantity of milk. The milk has an agreeable, mild rather rich taste and becomes somewhat sticky between the

fingers. People, who live not far off, and have tried these cowtrees in different years, do not praise much their milk-yielding qualities. I have neither seen the fruit nor the flowers of this tree, but in comparing its leaves with leaves of plants in my herbarium I find the closest resemblance in shape, structure and venation with some species of fig trees. The wood is white and of considerable hardness.

I passed the night following, in the midst of an immense forest on a thin layer of dried grass, in a small uninhabited open shed, (a plaintain leaf-thatched roof resting upon six isolated posts), near to which a tiger was said to have his range. Towards evening torrents of rain poured down, but the night was still and undisturbed, except by the rushing mountain-stream at some distance off, which appeared to the watchful ear like the hollow rustling of a forest in a gale of wind. One solitary bird near by made the spot still more melancholy by its mournful notes, which it sent forth from time to time throughout the night, unanswered by any thing living.

These damp and shady primeval forests, especially when fronting the sea, are also to be noted for the great amount of ferns, with regard to species as well as to individuals. As to number of individuals the different heights show no marked effect. I found them in masses equally dense at 1500 and 6500 feet elevation. The only difference we see is: the change of species in different heights, and even here we find many species to extend over a great area of different elevation; but most species are rather of a local habit. We can therefore from the amount of ferns which occurs in any given place not very well deduce the mean temperature of that place, as is sometimes done in geology in conjectures about the temperature of the earth's surface at the time of deposition of the coal-fields, unless we know what temperature belongs to the luxurious growth of that very species, which we wish to draw conclusions from. The yearly mean temperature for the regions of ferns may vary from 56° to 80° F.

At certain seasons of the year when standing on some high mountain, especially early in the morning, we may see dazzling white coherent masses of clouds filling up far below us whole valleys. The surface of these clouds representing immense and level snow-fields, from which in a most lovely and striking contrast the green summits of the smaller mountains protrude as so many islets or higher and lesser promontories of a frozen arm of the ocean. The delusion is sometimes most complete and cannot be viewed without feelings of pleasure and surprise. The elevation of the upper surface of these clouds was between 5 and 6000 feet above the level of the sea.

The foregoing few extracts I have taken from my journal.

With regard to the books you kindly offer to send, I do not know in what way I could receive them best; for of all the printed matter, which Prof: Hooker has sent, I have not received a single sheet; and Messrs. Lea & Co. say, they know nothing about them.

Please remember me kindly to Mrs. Gray. I am happy to hear, that my letters to you are not devoid of interest to her also.

I remain respectfully and truly

Ever Yours

H. Fendler.

[illegible] [illegible] has been useful to me in [illegible] [illegible] [illegible], and I return it to you with sincere thanks.

You will find the number of specimens contained in each set [illegible] had in the [illegible] [illegible]. The following are the numbers of specimens.

	No. of Set	Fir[illegible]	Phanae	total	
	1				
Bost. Hooker —	2	115	677	792	£16. —
Grisebach —	3	108	525	633	$63.30. — 12.60 = $50.70
A.G.	4	94	397	491	
Engelmann —	5	86	364	450	
Short —	6	84	309	393	
Thompson	7	[illegible]	263	338	— £11.1.8.
Boissier	8	69	202	271	= $27.00
Debaudelle	9	69	181	250	= 25.00
[illegible]	10	[illegible]	133	[illegible]	£4.17.0 (mistake)
[illegible] (Harvard [illegible]) —	11	68	135	203	— $20.00
Delessert —	12	66	115	181	$18.00
Martins — +	13	59	102	161	$16.00
	14	[illegible]	89	147	
	15	[illegible]	79	[illegible]	
	16	57	120	177	
Eaton — +	17	53		53	= $5.30 paid.
Miss Morris	18	55		55	= $5.50 Paid.
	19	49		49	
	20	40		40	
Eaton — +	21	140		140	= $14.00 paid —
Col. Munro	22	111		111	$11.10. —
	23	81		81	
				3362	

Orchids Lindley has paid $20.00

You will see that I have a few [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] set 3. They are not large but [illegible] good specimens, and as there [illegible] the same quantities [illegible] the class of plants [illegible] may be able to sell them also.

[illegible] [illegible] set 381 arranged by [illegible] [illegible] I shall send it along with the rest.

Respectfully and truly
Yours
A. Fendler.

Ord: Danaeaceae.

No. 1. Danaea alata. Smith.
" 3. Eupodium Kaulfussii, Smith

Ord: Filices.

I. Osmundeae.

5. Osmunda spectabilis. Willd.

II Schizaeae.

6. Ameinia villosa HB. Kth.
8. " hirsuta Swtz
9. " pumila Kl. ?
11. " (pastinacaria. Mor.)
13. " phyllitidis. Swtz.
15. " repens. Viaddi
14. Lygodium polymorphum.

III Hymenophylleae.

16. Trichomanes rigidum. Swtz.
17. " eximium. Kze
19. " diaphanum HB. Kg.
20. " scandens. L.
21. " radicans. Swtz.
22. " [illegible]choideum Swtz.
23. Didymoglossum reptans. Presl.
24. " quercifolium. Presl.
27. Hymenophyllum pedicellatum. Kze.
28. " candicantatum Presl.
30. " polyanthos. Swtz.
31. " (apicale - Mor.)
33. " organense. Hook.
34. " axillare. Swtz. ?
37. " ciliatum. Swtz.
38. " hirsutum. Presl.
39. " plumosum. Kaulfuss

IV. Gleicheneae.

41. Mertensia ferruginea? Desv.
43. " pubescens. Willd.
44. " furcata ? Willd.
45. " Bancroftii Hook.?

V Cyatheae.

46. Hemitelia integrifolia. Kl.
47. Alsophila villosa. Presl.
48. " pruinata. Kaulf.
49. " aculeata. Kl
50. (Cyathea elegans) Mor.
52. " Mexicana ? Cham: & Schl.

VII Polypodeae.

1. Dicksonieae.

57. Balantium Karstenianum. Kl
58. Dicksonia rubiginosa. Kaulf.
59. " consanguinea ? Kl.
61. " Lindeni. Hook.
62. Davallia Lindeni Hook.
63. (Lindsaya Klotzschiana) Mor.

2. Pterideae.

64. Cheilanthes viscosa. Karst.
65. " microphylla. Swtz.
66. " scabra. Karst.
67. Adiantum radiatum. L.
69. " formosissimum. Kl.
rhomboideum. Schlechtr.
70. " tenerum. Swtz.
71. " chilense. Kaulf.
74. " repandum. Fausth.
75. " concinnum. Herb. Wil.
78. " (spectabile. Mor.)
79. " patens. Willd.
80. " polyphyllum. Herb. Wil.
83. " Tetraphyllum. Wild.
84. " rhomboideum. HB. K.
86. " pulverulentum. Herb. Wil
87. " obliquum. Wild.
88. " macrophyllum. Swtz.
89. Allosurus flexuosus. Kaulf.
90. " ciliatus. Presl.
91. Dorypteris palmata. J. Smith.
93. (Pteris glauca) Mor.
94. " [illegible]laris) Mor

95. Pteris elata. Agh.
gigantea. Wild. Herb.
98. " Brizabae. Mart. & Gall.
100. (" calcarea.) Mor.
101. " deflexa. Link.
103. " nemoralis. Wild & Agh.
104. " caudata. L.
105. " longifolia. L.
110. Blechnum glandulosum? Kaulf.
112. " (latifolium). Mor.
113. " longifolium. H.B.K.
114. " (pygmaeum) Mor.
115. " Meridense. Kl.
117. Salpiglaena volubilis. J. Smith.
118. Lomaria arborescens. Kl. & Kard.
119. " (obtusifolia). Mor.

3. Asplenieae.

123. Asplenium (elegantulum) Mor.
124. " cicutarium. Swtz.
125. " flabellulatum. Kze.
126. " cirrhatum? Rich.
128. Diplazium expansum. Wild.
129. " Shepherdi. Post.
130. Asplenium pumilum. Swtz.
131. " aquaticum? Kl. & Karst
133. " formosum. Willd.
134. " monanthemum. Swtz.
138 " auricularium. Desv.
135. " bissectum. Swtz
136. " Sohkuhrianum. Post
137. " Fernandezianum? Kze
139. " Ruizianum. Kl.
140. " harpeodes. Kze.
142. " macilentum Kze.
143. " abscissum. Willd.
144. " salicifolium. L. Wild.
145. " alatum H. B. Kth.
149. Lotzeae diplazioides. Kl. & Karst
153. Diplazium celtidifolium. Kze
154. " plantagineum. Sw.
155. Asplenium serra. Langsd & Fisch.
157. " praemorsum. Swtz.

4. Aspidieae.

160. Didymochlaena sinuosa. Desv.
161. Nephrolepis (tuberosa) Mor.
162. " exaltata. Schott
164. Aspidium trifoliatum. Swtz.
165. " macrophyllum. Swtz
169. " (chaerophylloides) Mor
170. " tenuifolium. Swtz.
173. " Moritzianum. Kl.
175. " platyphyllum. Willd.
177. (Polyp. or Aspi.) exaltatum. Kl.
188. Aspidium (giganteum) Mor.
189. " (riparium). Mor.
192. " angiscens. Link.
194. " sessilifolium. Kl
197. " patens. Raddi
199. Polypodium crenatum. Swtz.
205. (Aspidium laetum). Mor.

5. Polypodieae.

206. Polypodium pteroideum. Kl.
207. " tovarense. Kl.
209. " (delicatulum) Mor.
210. " xanthotrichum. Kl.
211. " truncicola. Kl
213. " (arcuatum) Mor.
214. " Moritzianum. Link
215. " (radicale.) Mor.
217. " (leptophyllum). Mor.
218. " apiculatum. Kze
219. " pilosissimum. Mart.
220. " Phyllitis. L. W.
221. " molle. H. & B.
222. " porrectum. Willd.
224. " angustifolium. Swtz.
226. " amphostenon. Kze. } ?
leucorrhizon. Kl }
227. " phyllitidis. L.
230. " fasciale. Humb. & B.
235. " rhizocaulon. Willd. } ?
fraxinifolium. Jacq. }
241. " areolatum. H. B. K.
242. " harpeodes. Link
243. " (glaucorhizon) Mor.
244. Polypodium lasiopus. Kl.
245. " (decurrens.) Mor.
250. " lepidotum. Willd.
251. " leucosporum. Kl
252. " Abyssanolepis. Al. Braun.
253. " incanum. Swtz.
254. " (aretopus) Mor.
255. Xiphopteris serrulata. Kaulf.
256. Macrosorus marginellus. Kl.
257. Polypodium jungermannoides. Kl.
258. Vittaria gramminifolia. Kaulf.
259. " stipitata. Kze.
260. " costata. Kze.
261. Polybotrya serratifolia. Kl.
262. " canaliculata. Kl.
263. Acrostichum flabellatum? H. & B.
264. " " erinaceum? Fée
266. " Moritzianum. Kl.
269. " Meridense. Kl.
270. " Bellermannianum. Kl
271. " cuspidatum. Willd.
273. " tectum. Kl. & B.
279. " brevipes? Kze.
281. " (Klotzschii) Mor.
282. " Stenopteris. Kl.
283. " alismaefolium. Fée
286. " Lloense. Hook.
296. " pachyphyllum. Kze.
297. Gymnogramme trifoliata. Desv.
298. " Calomelanos? Kaulf.
299. " tartarea? Desv.
300. " (Kunzii)? Mor.
aff. G. refracta Kze.
301. " petroselinifolia. Kl.
303. Hemionitis palmata. L.
304. Anthrophyum lanceolatum. Kaulf.
305. " Cayennense. Spr.
306. Lepetogramme aspidioides. Kl.
307. " rupestris.
308. Lomaria Meridensis. Kl.
309. " Plumieri. Desv.
310. " L'Hermieri. Borg.
311. Lomaria Bredemeyerianae Kl.
312. Ophioglossum reticulatum.
326. Asplenium integerrimum Spr.

— o —

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	
Filices & Lycopodiaceae	347.	312.	299.	287.	273.	264.	257.	248.	240.	228.	217.	209.	204.	197.	192.	182.	172.	154.	147.	142.	
Polypet. Exogens	627.	421.	326.	274.	242.	204.	182.	169.	150.	136.	116.	101.	95.	86.	71.						
Monopet., Apetal. & Endogens.		923.	747.	637.	534.	452.	409.	371.	331.	301.	260.	228.	204.	169.	151.						
Total		1656.	1372.	1198.	1049.	920.	848.	788.	721.	665.	593.	538.	503.	452.	414.	182.	172.	154.	147.	142.	= 12,514.

2. packages Mosses & Hepaticae
3. " Fungi
2. " Lichens.
bottles.

Box No. 1. Polyp: 4.I, 4.II, 5.I, 5.II, 6., Monop: & End. 14.
Ferns: 4.I, 4.II, 5.I., 5.II, 6.I, 6.II,

Box " 2. Polyp: 9., 10., 12., 13., 14., 15.,
Ferns: 12., 13., 14., 15., 16., 17., 18.,

" " 3. Polyp: 2.I, 2.II, 2.III, 2.IV, 3.I, 3.II,
Ferns: 2.I, 2.II, 3.I, 3.II,

" " 4. Polyp: 7., 8., 11.,
Ferns: 7., 8., 9., 10., 11., 19.,

" " 5. Mon:-End: 2.I, 2.II, 2.III, 2.IV, 5.I, 5.II, Lichens. = 1457 + Lich:

" 6. Mon:-Endog: 6.I, 6.II, 7.I, 7.II, 8.I, 8.II, = 1232 + (11 & 12)?

" 7. Mon:-Endog: 3.I, 3.II, 3.III, 4.I, 4.II, 9., 15., = 1639?

" 8. Mon:-Endog: 4.III. 10., - Moss: 2 pack:, Fungi 3 pack:
overcomplete Ferns: 1 packages.

there is 11. 12. 13. 14. Monop, Apet & Endog

La Guayra, Febr 5th, 1856.

Invoice

Exog, Endog: Ferns 1.51 Cat.
pack Mosses Hepa
Fungi Lichens 49
$1300

Baltimore Oct. 23d, 1858.

Professor Asa Gray M.D.

Dear Sir

Mr. Hannock promised me to forward this day four boxes of plants to you per steamer Arcadia for Liverpool. These are the plants mentioned in my last letter. Of my own set No. 1 I have opened some packages and commenced writing my remarks and notes for the different genera, after the labels, but I found that I was a job taking up much more time than I first anticipated. It would take me at least three weeks to get through with all of them. This would not only have put me to a great expense while at Baltimore, but also delayed my arrival at Saint Louis, where I think of going as soon as possible, to get into some kind of a house before winter sets in.

I therefore shall send the plants to Saint Louis, where I think of working at them in my leisure hours

since the last account I gave you of my Orchidae, I have collected some more species, but how many I do not know as yet. Mr. Lindley will see what they are.

If you write again please send your letters to this place as in case of Dr. Engelmann, for it is very likely that I shall have them today.

Respectfully and truly yours

Wm. Sintenis.

Herbarium
University

[illegible], October [illegible], 1858.

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] received a letter [illegible] 1858 [illegible] 6.50 [illegible] of the [illegible] most [illegible] [illegible] [illegible] business, but [illegible] [illegible] [illegible]

my heart and [illegible]. Day before yesterday I was taken with a fever accompanied by great bodily weakness. The respiration was very short and troublesome, and my appearance began to be rather [illegible] miserable.

I do not know how long this condition is going to last, but I think I am not mistaken in my opinion that my health will get worse if I continue to stay here, and that there is only one remedy only: a removal to the mountainous regions of the [illegible], to places like the [illegible].

Not that I am afraid to die, for I have faced death more than once; but when there is a given condition of rescue by a speedy change of climate and we have the means to do so, and still stay where we are, the case may be compared to a man, who having accidentally fallen into deep water, refuses to save himself and says: "no let me go down and be drowned". But now it is [illegible] to go [illegible] right off. I am unfortunately so situated, that if I can not sell my property at once for cash, I have to take the consequences of delay.

Nature seems to have pointed out for me one particular occupation, in which I was blest with health as long as I adhered to it; as soon however as I [illegible] for [illegible] through the wild woods and over the rugged mountains and ventured to go into some other kind of business, some kind disease [illegible] upon me. [illegible] [illegible]

[illegible] [illegible] mountainous regions [illegible] [illegible]? Is the [illegible] of [illegible] [illegible]. But the [illegible] [illegible] [illegible], we will probably not [illegible].

[illegible]

[illegible] [illegible]!

[illegible] few days ago [illegible] [illegible]

[illegible] should have [illegible] [illegible] as [illegible] over these [illegible]!

[illegible]

happy [illegible] year [illegible]

[illegible] truly and [illegible] yours

[illegible]

viscosa; which has much smaller heads than M. anceps, and generally entire leaves, in these specimens at least. —

The two seeds are, an almost smooth one of the Lithospermum above mentioned which I think is a small flowered breviflorum, the punctate one is a very similar plant, some flowers, no other apparent difference, which may be named var. punctulosum.

By the way Ellisia Nyctelea from St Louis, and also Hayden's plant often makes spikes; or is ours a different plant?

I am also working at Newberry's Cactus which he has sent me

St Louis Jan. 3d 1859

My dear Gray

Your welcome lines with your wishes for a happy New year came just on New Year Morning! — Our best wishes to you and yours!

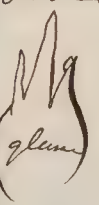
So you see I am beginning to work a little in Botany. Thank you for your kind offers to assist me; I shall certainly trouble you somewhat! So again the day!

Dr Hayden in his anxiety to get up a fine report, seems to go round every where, to you, Torrey and also to me. He writes however that he will not be able to print it. Nevertheless it will be well to have the list made out, and the novelties published somewhere, which is better than to publish the long lists of common plants. So say brother also.

By the way Dr Lewis got my

Gray Herbarium
Harvard University

brothers collection of 1858 from Fort Kearny to Fort Laramie; fine specimens and a few good things. He also sends Lactuca ludoviciana! But the best thing is the female of Sesleria dactyloides. A fine new genus, I think, division (is there any other diœcious grass of our flora?) — nearly allied to Bouteloua with capitate spikelets, and rudimentary or rather lyriform glumes. I shall write a paper about it with drawings; the glumes are 3 aristate and 2–4 flowers forming a head or spikelet (connate and)



Do you know any thing like it?

You see that I paid Fendler $61.80. He is a little dispirited, the climate does not seem to agree with him; he coughs etc. If he gives up his present purposes it will be time to talk to him about Shaw or Utah; but he seems to prefer tropical climates.

No further progress with Shaw. I do not see enough of him, but my profession keeps me too busy. I am almost in the old way again, and am much considering how I can manage to devote myself entirely to Botany, but do not see yet. Mrs Engelmann sends her love to Mrs Gray.

Yours ever G. Engelmann

Received of Dr George Engelmann on account of Prof Asa Gray the sum of sixty one dollars $\frac{80}{100}$

Albany Dec 22d 1858

A. Fendler.

What is Lindheimer 477? The same is in Hayden's Collection. Looks as Echinospermum (perhaps patulum?) or a Pectocarya? I can not make out.

A small fragment of Lithospern. angustifolium to compare specimens would be desirable. Hayden has collected the same plant, that Lindheimer has sent often, L. brevifloruum but with smaller corolla than the original. If there were scales, I would take it for L. angustifolium, which I do not know.

What is Torrey's Myosotis suffruticosa from the Platte?

The above named 477 of Lindheimer is a curious plant, which I can not find in DeCandolle, and which ought to be named if undescribed, E. umbilicatum.—

I include in this letter a small plat of Hedeoma Drummondii of Dr Hayden; my brother has collected the same. Also a fragment of Dieteria or Machaeranthera

Saint Louis Mo., March 11th 1859.

Dear Sir

I have just received your favor of the 18th ult. through Dr. Engelmann and am pleased to learn, that you have some money for me. I am not much known in commercial circles here, and have started to under some disadvantage in trying to draw on you. I would therefore request you to be so good as to send me a check, either on Boston or New York, and to address the letter in care of Dr. Engelmann.

Since I wrote to you last I have sold my set of teeth to Mr. Samuel G. Tilton, Surgeon, &c. Dr. Engelmann has also paid for his set of U.S. Sign Tables, and my communications to him, from time to time, printed in his last volume of the Transactions, which I have sent me so often. Accompanying this I send you one of them as it may serve to elucidate somewhat the mutualogy of the organs where the greater part of my collections was made.

In packing my boxes I found a few pieces of trunks of tree-ferns, some jars of large grasses, a few young leaves of palm trees as folded up in vernation, and a stalk of small palm. These I should like to send you as soon as an opportunity may present, but for them to go together with some other things.

With regard to my Orchideae sold to Dr. Lindley I find in his letter, which I hereby enclose, the following sentence: "He (Dr. Hooker) thinks if I pay for the lot as 200 at 4 £ per 100 it will be proper and so I send you half for that sum."

From this I infer, that Dr. Lindley was going to pay 4 £ per 100, but owing to the words "lot" and "4 £" not being far apart, he might have probably taken 4 £ as the whole amount, while at the same time he meant to pay 4 £ per 100. It seems to me that dried Orchideae ought to be worth a little more than dried grasses, especially when detached from a set, the remainder of which loses hereby in value. That you are of a similar opinion on this subject I see from your letter of December 26th 1857, in which you say $30 or $40 for 205 specimens would not be too much.

Respectfully and truly yours

A. Fendler.

Prof. Asa Gray M.D.
Harvard University.

Saint Louis, Mo., March 27th 1859.

Dear Sir

Your kind favor of the 21st inst. containing a check on Charles River Bank for $25 U.S. Cy., for which I thank you very much was handed to me yesterday by Dr. Engelmann. My thanks are also due to you for adding the £ sterling 5 dollars in remitting to me the English payments.

If Dr. Lindley was advised to pay but £ 2 per 100 for my Orchideae, then I will ask nothing more, and he shall be very welcome to them if he finds them to be worth that much. But if on the contrary he finds, that the greater part of them, from being common things, are of no use to him, which I am inclined to infer from his letter, then I should be very sorry indeed that I ever offered them to him. Some they would be at least objects of remembrance of the amount of labor bestowed upon, and perhaps of an over animated enthusiasm in searching for them.

Of the 500 species of ferns and Lycopodiaceae collected by me in Venezuela (now in possession of the Daniel C. Eaton), 74 species of ferns have their venation anastomosing.

Ever yours Respectfully & Truly

A. Fendler.

Professor
Asa Gray M.D.
Harvard University.

Mount Louis, Nov. 1st, 1859.

Dear Sir

I have just received your letter of the 31st ult., and in reply I wish to say that I am willing to dispose of my full set in the way you propose. Perhaps it would be best to send you the whole set at once. Shall I do so, or shall I send only the orders you have mentioned?

I wish to send a letter to Prof. Hardy of England on some subject in Natural History, viz. Please let me know his full direction.

Respectfully and Truly

Your friend

E. F. Fendler.

Professor Asa Gray M.D.
Harvard University.

Saint Louis, Mo. December 15th, 1859.

Professor Asa Gray M.D.

Dear Sir

Your pleasant letter of the 28th ult. I have received in due time, and am very much obliged to you for your kind offices performed in behalf of my communication to Prof: Faraday.

I should like to carry on a correspondence with Professor Henry, as you advise me to do, if it was not so very hard to get an answer from him. I am in the habit of communicating to him facts gathered from actual observation, but did not know that he is also dealing in the more abstruse subjects of science.

I would have sent my plants to you more than two weeks ago, but owing to the desire of Dr. Engelmann to send some of his plants along, I was obliged to delay sending until yesterday, when I received his packages.

The following is a list of the packages of my Venezuelan plants which I have sent you:

package I	contains	Ord: 1–23	= 108 specimens
" II	"	Ord: 25–39b	= 174 "
" III	"	" 40–51c	= 173
" IV	"	" 52–68	= 203
" V	"	" 70–71	= 153
" VI	"	" 72–74	= 165
" VII	"	" 75–90	= 211
" VIII	"	" 91–98	= 179
" IX	"	" 99–102	= 174
" X	"	" 105–111, 117, 133 and doubtf: Exogens	= 110
" XI	"	" Endog: 2–24	= 123
" XII	"	" End: 14, 22, 26 Exog: & Balanophoreae	= 123
" XIII	"	Ord: for Prof: DeCandolle	= 260
" XIV	"	Papilionaceae - - - 145	= 259
" XV	"	Caesalpin: & Mimoseae 114	
" XVI	"	Gramineae - - - - -	= 188
			2603

The Cactaceas I have given to Dr. Engelmann.

Besides these packages I send you also the long ago promised portions of fern-stems, &c.; the bamboo-joint I was obliged to shorten about a foot to get it into the box, and the little palm stem (a full grown specimen) I had to break for the same reason. I also send you my notes on the plants collected in Venezuela; and as I have copied them upon the labels of all the different species in the present full set (56.) you may keep these notes for your own set.

At first it was my intention to send the box by Adams Express, but finding that it got to be very heavy, and the expenses for transportation by this conveyance would amount perhaps to 8 or 9 Dollars, I agreed with Dr. Engelmann to let it go by railroad. I offered to pay for the freight here in St Louis but was told at the Depot that I could do so only for the distance to Cincinnati. So you will please to pay the freight and charge the same to me.

You will perceive that I have arranged the packages of plants according to the orders of the Natural system. With some species, however, I was in doubt, I therefore may have committed some blunders in assigning to them their position, and placed them into orders to which they may not belong.

Respectfully and truly
Yours
A. Fendler.

Saint Louis, Mo February 15th, 1860.

Professor
Asa Gray M.D.

Dear Sir

Your favor of the 5th inst. I received a few days ago and am very glad to hear that the box with plants has safely reached you. I ought to have sent it by express and rather paid a little more

Although in the summer season the camphene business was worse than no business at all, and in fact a losing one it was improving pretty fast as winter advanced, so that from the 1st of October up to this time I have had no reason to complain of it; and considering the great competition that exists here with regard to camphene and light of all kinds, I have been doing tolerably well. The good season, however, will soon be over, and I have therefore commenced experimenting on crude coal-oil to find out some chance for a new branch of business. I have also intention of making a short trip in a week or two to some of the flourishing smaller towns on the Mississippi river, farther south, to see what could be done there in my line.

You ask in your letter how I should like to go to California and explore some of the many parts yet little known. I need hardly say that my disposition and mind is decidedly that way, for an inherent longing to roam through Nature's wilds can never permanently be quieted. I at times discouraged by combinations of adverse circumstances, by privations and sufferings, I feel dissatisfied with such a life, and wish for a quiet home —, no sooner has that home been enjoyed for a little while, but the old propensity awakes anew, and hurries me on to the woods and the prairies, to the mountains and lakes.

It seems however, that by buying a lot and building a house I have at last tied myself down to the spot I now live on. Nevertheless, I think, I shall be enabled to give you a more definite answer to your proposition, after I shall have seen some of the smaller towns below here.

Allow me to ask how many specimens of each specie I could be <u>sure</u> of selling. Far from the interior no person without ample means of his own could send on collections if he cannot get facilities from Government or some other source for transportation, for it is evident that with such exorbitant prices as paid in some parts of California, the value of the plants would not cover one half of the cost of transportation.

From Mr. Shaw, Dr. Engelmann thinks little or nothing can be expected. He seems to have a peculiar view of botany, for he has not even yet opened the box with dried plants which Dr. Engelmann has bought for him in Europe.

Respectfully and Truly

Yours

A. Fendler.

St. Louis, Mo. October 8th, 1860.

Professor Asa Gray
Cambridge Mass.

Dear Sir

Since about the 5th, the time you received the box containing my set of Texan plants I have not been favored with a letter from you, and do not know what prospects you have for selling those plants. The Leguminosae, Gramineae and the smaller orders not yet published in the Prodromus may have already reached their places of destination, but whether you have been successful in getting remittances or not I do not know. Thirty dollars I received by your order from Dr. Engelmann on the 23rd of May. Since then I have nothing received. Is there anything due to me yet?

Business is dull as usual. I have, however some hopes of being employed by Mr. Shaw

Gray Herbarium
Harvard University

is arranging his extensive European herbarium &c, on what terms and conditions I shall probably find out within a few days. Although he has not opened the boxes yet he is apprehensive, that these plants will be of much trouble to him.

Respectfully and truly Yours

A. Fendler.

Tower Grove near St. Louis
March. 9th. 1860.

Dear Sir

I have received your favor through Dr. Engelmann, who also paid me on your account 50 Dollars, for which I thank you very much indeed.

If you should find that there is no chance at all for selling the remaining orders of my set of Venezuelan plants, I think it probable that Mr. Shaw may perhaps be induced to buy if he could see them.

Since the 12th of last month I have been at the arranging of Bernhardi's now Mr. Shaw's herbarium; but as a good deal of my time was, and is still occupied in work connected with the green house and gardens, I have not made much progress. So far I like my new situation very well and am properly treated by Mr. Shaw.

As I am now getting somewhat into the gardener's business, and have never

Gray Herbarium
Harvard University

seed of my namesake, Fendlera rupicola

or if in a live state, I should

be very much obliged to you for a few

ripe seeds.

Respectfully and truly

your friend

Prof. Asa Gray, M.D.

Harvard University.

E. Fendler

Tower Grove near St. Louis, May 9th 1861.

Professor
Asa Gray M.D.

Dear Sir

According to your wish I send you hereby my photograph. It is made by one of our best photographers and shows how far in the rear our artists stand when compared with yours. My acquaintances tell me that the photograph shows somewhat to my disadvantage especially with regard to the eyes, but I think we have to let it go as it is. I should have sent it sooner, but it is only about a week ago that I had a chance of going to town, for I am kept very busy at present. Several species of the Australian seeds you kindly sent us have germinated already; also some Rocky mountain seeds which Mr. Shaw bought last fall.

I have carefully sown spores of Cuban ferns given me by Dr. Engelmann, but as yet there seems to be no seign of germination.

I have also commenced to collect plants indigenous to this locality for planting out in the open ground, and have arranged and labelled them according to the Natural system.

The Sisyrinchium Bermudiana viz: the white fl: variety is now in full bloom, and when its numerous ~~flowers~~ blossoms are opened is a pretty and showy flower. Its color is pure white.

Both yours and Dr. Engelmann's photograph have been handsomely framed and put up in a conspicuous place in the herbarium room, where I have the pleasure of beholding at any moment the faithfully represented image of yourself whom I have learned to esteem and to love.

Mr. Shaw had also your portrait as well as Dr. Engelmann's painted on the ceiling of the library room of the museum with that of Linnaeus in the middle.

Respectfully and Truly

Ever yours

A. Fendler.

[illegible], [illegible], [illegible] [illegible] 18[illegible]

[illegible]

[illegible] as [illegible] by [illegible] [illegible].

In my present situation [illegible] removed from the excite[illegible] [illegible] [illegible] [illegible]ful times [illegible] [illegible] [illegible] [illegible] [illegible] a week [illegible] [illegible] [illegible].

[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] in distant [illegible] I felt proud [illegible] [illegible] [illegible] [illegible] inhabitants of [illegible] [illegible] [illegible] great and prosperous [illegible] [illegible] [illegible], and [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] of the great republic and the American people.

[illegible] to have one great rival-power less. It is only another instance of the fact that when in republics the interests of different sections are so widely different

[illegible] can last [illegible] for a limited time and even the greatest [illegible] of the wisdom of man thus reared must fall; and notwithstanding our boasted civilization men and their passions are the same as ever when once aroused by [illegible] of [illegible].

[illegible] inspires, as I think, no great [illegible] to the North: It has namely on its side, as always will have, the prospect of increase of population and power on account of its greater number of small landholders, while the tendency of the South is diminution, large estates owned by comparatively few landholders. And indeed if it was not for slave-labor these large estates would present the same desolate spectacle as other similarly circumstanced countries in South America if not divided into small freeholds.

[illegible] the Southern States the rough and broken [illegible] for plantations and regular [illegible] the hardy sons of toil, or in general all the small property holders, constitute here as in South [illegible] the real strength of the country. And as soon as the class of people is made to feel that their interests are [illegible] cut [illegible] large land- and slave-holders [illegible] the strength of the latter [illegible].

[illegible] has no such [illegible] [illegible] itself and [illegible] better after all.

[illegible]

[illegible] last by [illegible] zone [illegible].

These are merely [illegible] simple reflections that pass my mind in looking at the [illegible] of this [illegible].

[illegible] letter [illegible] [illegible] request I will [illegible] [illegible] [illegible].

Respectfully [illegible]

[illegible]

Prof. Asa Gray M.D.,
Harvard University

[illegible]

Tower Grove, August 11th 1862.

Dear Sir

I thank you very much for the interesting pamphlet you were so kind as to send me a few days ago, containing ~~your~~ your remarks on Darwin's new book, on Dr. Hooker's outlines of the distribution of arctic plants, on the cedars of Lebanon &c.

Enclosed I send you some seeds of Sisyrinchium Bermudiana with white flowers. They are found here in moist grassy places in the spring, the flowers always preserving their character of a pure white color. I have also dried specimens of the plant for you, but have had no opportunity of sending them on.

The late order for drafting has caused some fluttering here; but as I am over 45 years of age I hope to be allowed to remain at home.

Very Respectfully & Truly Yours

Prof. Asa Gray M.D.
Harvard University

Aug. Fendler.

Gray Herbarium
Harvard University

Tower Grove near St. Louis Mo.
June 2d, 1863.

Dear Sir

By the interesting pamphlets you send me from time to time I am admonished now kindly I am yet remembered by you. The last one I received was the enumeration of the species of Plants collected by Dr. Parry &c in 1862 for which I hereby tender you my sincere thanks.

So far I have engoyed pretty good health with the exception of 3 or 4 weeks in early spring, when I suffered severely from rheumatism. Being in the employ of another man and having but little time of my own I cannot in my present situation devote much time to science. I have now been 2 years and 8 months with Mr. Shaw; our brother has during this time been raising a little nursery of over 4000 budded peach-trees, and we are about to look around for some land wherein to establish an orchard. Our means are but very slender we will have to go a good distance from St. Louis. My wages has been but 6 dollars a week and board; clothes are very high, besides this I had to render a good deal of assistance to my brother in starting

the nursery. So you see I could not have made much headway in the acquisition of capital; and as I have a great aversion to run into debt I shall, in buying a place, be obliged to look at cheapness more than convenience. In a few weeks I intend to ask Mr. Shaw to let me go on a land hunting excursion 40 or 50 miles South of here. If our national troubles ~~are not~~ do not make such a Trip too dangerous.

A great many flowers in our botanic garden are now in bloom, and every thing grows finely, and of course the weeds also, so that we at present have 20 hands employed mostly at weeding.

We had some fine showers of rain lately and the weather generally has been very propitious this spring. More visitors have been to see the garden this spring than ever before.

Very Respectfully and Truly
Yours

Aug. Fendler.

Professor Asa Gray M.D.
Harvard University
Cambridge
Mass.

Tower Grove, near St. Louis, Mo.
October 28th, 1863.

Dear Sir

I have been hoping from day to day to be able to let you know something definite as to the course I shall have to take this fall, and although I have as yet nothing satisfactory to communicate on this subject, I cannot, without feeling a kind of remorse, delay any longer my answer to your most kind and welcome letter of June, the 10th, which speaks in every line a most tender regard for my welfare. Would to God that my best wishes and prayers for you might be fulfilled.

I expected to have my arrangements for establishing an orchard completed long before this time, but the strange actions of Mr. Shaw, by which I was kept all the while in uncertainty and detained by illusive hopes, has retarded the execution of my plans.

On the return from my first excursion to secure a piece of Land adapted to fruit-culture, Mr Shaw fearing I would leave him, offered me on a lease of 12 years an eligible piece of ground which suited me very well; no sooner had I commenced to work for him again, when he told me that he had reconsidered the matter and would let me have another piece adjoining his garden instead of the place first promised. This second piece was much inferior to the first but to indemnify me, he said he would let me have it for 15 years instead of 12.

I could do nothing but agree to this proposal, but after I had measured the desired piece he made objection to its boundaries and wanted me to take a little more of the lower grounds. To this I could not agree as I had low ground enough already. I asked him about another piece which hitherto he had always been ready to rent for garden purposes, but instead of assenting he offered me a low and place which he very well knew was entirely unfit for a peach orchard, not even fit for a vegetable garden. While he treated me thus he rented 85 acres to strangers at 4 Doll. per acre for 4 years, while I was willing to pay 10 Doll. for part of the same place and make permanent improvements thereon only for a longer time, say 12 years. Seeing that I could make no bargain with him I left again on the 9th of this month for Strongville, a little town 16 miles north of Jacksonville Ill., with the intention of buying me 30 or 40 acres and rather lead the life of a backwoodsman than to conform to the caprices of a man that knows no other attachments to his fellow-man than what his own selfish ~~interests~~ ends dictate.

This may seem as judging the man too severely but it is true nevertheless. His own relations tell me that they cannot stay with him. I would have left him long ago but my finances are such that I had to hold out a little longer, as I dread nothing so much as to run into debt. A few days ago I was grossly insulted in my own room by a notorious Irish drunkard, one of his hands. Still Mr. S. kept this man in his employ, and only when he saw that I was going to leave he said "I will discharge that man", which he did. In giving me thus a kind of satisfaction, I thought best to accommodate him in staying a little while longer.

At Strongville I found a piece of hilly land, 43 acres, suitable for an orchard, but only partially fenced in and cleared, and no other improvements on it, at 12 dollars an acre. Before making up my mind to buy it I should like my brother to go and see for himself. The State of Missouri, outside of St. Louis, offers as yet no very secure place to live in, and for this reason I hesitated to buy land in this State.

My full set of Venezuelan plants contained over twice as many species as set No. 4., and therefore I hope that by the addition of those plants your herbarium would gain something. I would rather see them incorporated with your herbarium than with that of any one else. The naming of the price of the lot I leave to you as you can judge best of their value, and I know that I am in good hands when I am in yours.

I am much pained to hear that Mrs. Gray's health is far from being good. I fervently wish and hope that she may soon recover and in the best of health enjoy life's happiness many a year yet to come. Please give her my best regards.

Very respectfully & Truly

Yours

Aug. Fendler.

P.S.
Please direct your letters to me in care of Dr. Engelmann.

Professor Asa Gray M.D.
Harvard University
Cambridge
Mass.

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Ill. Tour, Ill. Nov. 1st, 1861

My Dear Sir

I received your kind letter of the 7th inst. yesterday through Mr. Engelmann, and it was very glad you agree I have the right estimate of my character. I think that I shall be able to do, I am sure, justice to the trust, I should be glad have the lot, but not altogether, being a question over $7,000 hundred, to which I cheerfully assent.

I have had a conversation at Tiny Town on the 4th inst. and begin to prepare for moving from here as soon as we can dispose of such of our effects as we would well take along.

It is therefore most highly gratifying to me to have your kind disposition of selling by the 1st of next month. It would be just in right time for me to move along when money would be not only most desirable, but when I should be in actual need of it to pay for my land.

The Draft payable to my order
[illegible] will be sent [illegible]
[illegible]

I am very much [illegible] that
Mrs. Gray is still confined to her
room and that you have lately
been visited by sickness although
it is consoling that you are now
on a speedy recovery.

Yours truly and cordially
Yours
Aug. Sandler.

Prof. Asa Gray M.D.
Cambridge

Gray Herbarium
Harvard University

St. Louis, Mo. Febr. 7th, 1864.

Prof. Asa Gray M.D.
Harvard University

Dear Sir

In one of my letters I informed you that I was going to buy me a piece of ground near Atenzville, Ill. After due deliberate consideration I found that the land spoken of was rather too far from market and a little too far north for fruit raising, so I concluded to stick on and look for another place nearer St. Louis. In the mean time the extreme long cold weather of the first part of January, with snow on new year's day, put a stop to all my operations. After several unsuccessful attempts to secure a place, I succeeded yesterday in obtaining a bargain at $10.00 per acre for 83 acres situated 9 miles south of Alleenton in St. Louis county, a station on the Pacific R.R. 30 miles west of St Louis. Allenton is a little village of about 200 inhabitants. The land I bought consists of ten acres of the very richest of bottom land and 73 acres of high bluff, forming a semicircle to the N.E. of the former. This crescent of hills, sloping principally to the S.W. with a steep descent in some places, has probably an average height of 200 feet, and consists in a great measure of small angular pieces of lime-

Gray Herbarium
Harvard University

stone and nearly giving it at first sight a sterile appearance, but showing by the heavy growth of its Timber, such as Carya alba and the different kinds of Oak, fully out, that the interstices of this rough debris are filled with an abundance of rich soil, accumulated during a century from the decomposed masses of leaves ~~and~~ and other vegetable matter which every fall covers the ground to a considerable depth. These hills have the most complete natural underdrainage; for as soon as the rain falls it filters through, carrying the decomposed matter from the surface, and depositing it, as in a storehouse, in the interstices of the mineral fragments below. On such land I should suppose Peaches and other fruit, but especially the grape vine, would grow and thrive. I shall any how try to plant and rear them.

The whole tract of the 33 acres supports a heavy growth of timber and nothing is cleared yet. So you see there is plenty of work ahead, but the value of the Timber seems of itself to be a remunerative item. The place is quite romantic, and when once established in this my new home, I think I shall feel for the first time within the last six years as being again in my natural element. ~~when~~ From a cottage to be built on the firm hill-side I may then survey my little domain as it gets cleared up from day to day, and the bright sunbeam penetrates more and more the deep recesses of the dense forest, that has to make room for cultivated fruit, flowers and vegetables. Not all shall be cleared up, however, for the woodman's axes shall spare many a tree, ay, many a little grove, for I love to see the beautiful and grand objects of a forest too much, as to let them be exterminated on a place of which I have the control.

Excuse this fanciful sketch as it now rises up before my imagination, for life seems to open to me anew in more refreshing colors.

The severe frost of New-year's day has done great damage to fruit Trees, but especially to Peach trees, of which it has killed all above the snow, that is 4 to 6 inches from the ground. Grape vines and Pear trees have also suffered considerably.

My brother and myself intend to move to Allenton as soon as we can get off.

Respectfully & Truly
Yours

Aug. Fendler.

St. Louis, Mo. March, 5th, 1864.

Dear Sir

Yesterday Dr. Engelmann handed to me your very kind letter of the 25th ult., in which you offer me a pleasant and permanent situation as curator of your herbarium. Ever since the receipt of that letter I have been thinking and revolving in mind your propositions over and over again how I could best comply with your wishes for which I am always ready to sacrifice some of my own interests. But I can see no way to get out of my present entanglement. When your letter of the 25th reached me yesterday I had all my preparations for moving out to Allenton completed, and calculated on leaving St. Louis with all my shrubs and trees the day after tomorrow.

I have been under considerable expenses, inconvenience and losses to reach this cut, having where I could commence the planting of my trees and thereby get an early start with my orchard. This point I have now nearly reached and I am obliged to persevere a little longer, at least untill I have planted the orchard, built a house and given a start to the establishment. Or as you express it in your own words in your kind letter of the 17th ult. until "you have got fixed a little, your brother can spare you, and let you come here" This would be much more in accordance with my wishes.

Gray Herbarium
Harvard University

My brother is about 6 years younger than myself and not married. He could not very well get along at Allenton without me the coming season.

However I do not know what may happen in a few months with regard to the Draft & other circumstances, which may give our affairs quite a different aspect and force us to relinquish the whole business.

I am very glad to learn that Mrs. Gray is convalescent. Please express to her my best wishes and highest regards.

Respectfully & truly
Ever Yours
H. Fendler.

Prof: Asa Gray M.D.
Harvard University
Cambridge.

Allenton, St. Louis County. Mo.
March 23d. 1864.

Dear Sir

Your favor of the 9th inst. reached me last night. We have commenced clearing the land, in order to plant out our trees, shrubs & plants as soon as possible, before warm weather overtakes us. But finding that living at a boarding house is very expensive, we commenced building our frame-cabin day before yesterday. Besides this a fence is needed very much to keep out cattle and other animals. All this we are obliged to do with our own hands, as laboring men can neither be had here for love or money. So you may imagine that we hardly know what to do first.

From your kind letter I see that you want me to give you a more definite answer in regard to leaving my brother and coming out to you in the autumn. I wish I could do so, but it is yet too early to make any certain promise on which you could depend. My brother may be drafted, in which case I would be obliged to stay here in order not to let every thing go to destruction. In about 3 or 4 months from now I could ~~promise~~ give you a more definite answer; at present it is impossible for me to do so.

Respectfully and Truly
Ever Yours
A. Tandler.

Prof. Asa Gray M.D.
Harvard University
Cambridge.
Mass

Gray Herbarium
Harvard Univ

Allenton Station, St. Louis Co., Mo.
June 9th, 1865.

Dear Sir

Yesterday I received your favor of the 31st ult. offering me the situation as curator of your herbarium. Some days ago Dr. Engelmann had already communicated to me an extract from one of your letters containing the same proposition.

It seems very hard to me, as well as to my brother, that I should bid a long farewell to him and the little clearing which I once thought of making my permanent home. So far, I have not become tired of this place, and think I could have lived here contentedly to the termination of my earthly career; so well do I like this spot.

To accommodate you, however, and at the same time to better my pecuniary condition I will accept your offer, but should like to know by what time you want me to come. Will the 1st of September do?

I should not be willing to engage or bind myself for a certain long period, because something might happen that would

Gray Herbarium
Harvard University

require my presence in the West
to see to my interests there.

Respectfully & Truly

Ever yours

A. Fendler.

Prof. Asa Gray M.D.
Harvard University
Cambridge, Mass.

Allenton Station, St. Louis Co, Mo.
June 23rd, 1864.

Dear Sir

Upon my first letter of the 13th inst. you gave me another proof of the tender regard you have for my own feelings & attachment to my new home. You release me from all obligations towards you in order that I need not make any sacrifice but those of my own wishes. I have always been, and shall never cease to be, wishful to follow such a course, and have it even almost impossible for me in my last letter to you to decline your proposal. And even now, after you gave me full liberty to chose, I felt at first ashamed to decline and to be thus outdone by your generosity. You are the only person for whom I was willing to make the sacrifice of leaving here; and if you now don't wish me to act against my inclination I avail myself of your kindness, and say that I should rather like to stay here.

It would not only afford me much pleasure to handle your herbarium, but I should also feel honored to have committed to my care specimens of the highest interests, — plants that have been collected by many a daring explorer of ancient and recent date — and amongst which I could see again the beloved objects for which I once toiled and travelled. Should nature in its wild and living objects offers attractions which I can not well resist, especially when they can

be enjoyed in a place we can call our own. This together with the pecuniary interest I have at stake in this place induces me to decide in favor of staying where I am at present.

I am always

Respectfully & truly
Yours

A. Fendler.

Prof. Asa Gray M.D.
Harvard University
Cambridge
Mass.

Ellerton, St. Louis Co. Mo.
June 5th, 1865

Dear Sir

In your letter of the 26th ult. I find some of my inquiries satisfactorily answered. Some others, as for instance about board, you could not answer until you had gathered information. With regard to the fitting up of rooms I could have wished your answer to be a little more positive and explicit. You say: "I feel, of course, that I ought to make provision for your expenses in fitting up rooms &c". But this does not imply that you can conveniently make such provision.

You say: "Living is high in Cambridge, no doubt." Is there no other place to board in nearer than Cambridge? Is no one living in the Gardener's house I could board with? I don't like the idea of going very far to get my meals three times a day. I would nearly as soon go to Keeping house or batchelor's hall.

As you cannot see your way clear about a salary for me from the garden I would have to rely at present only on the $500 from the herbarium. Now

Gray Herbarium
Harvard University

if the necessaries of life would not be very high, so that I could save a little out of the $500, and if I had a fair prospect as to my salary being raised by and by from garden funds, I might be induced to have a snug little home and come to you by the middle of August.

If, on the contrary, the necessaries of life should swallow up the whole of my salary, a change of place would not be either profitable or desirable to me.

I am therefore awaiting your letter about the price of board, fuel and the assistance in fitting up rooms &c before being able to give a definite promise as to my coming.

Respectfully and Truly

Ever yours

H. Fiedler

Prof: Asa Gray M.D.
Harvard University
Cambridge
Mass.

Ulster St. Brooklyn Wd
June 1st 1865

Dear Sir

In reply to your letter of June 10th I will say that in view of the assurances therein given, I will take your offer and try how I can get along in the East, with the understanding that, in case I should feel inclined to return to my place here, I may be allowed to do so next spring.

I think I can manage so that I will reach Cambridge about the middle or end of August, if no sickness or other unforeseen circumstances prevent me from so doing.

Respectfully and truly
Your friend

A. Fendler.

Asa Gray M.D.
Harvard University
Cambridge
Mass.

Gray Herbarium
Harvard University

Allenton, St. Louis Co. Mo.
June 28th, 1865.

Dear Sir

Under date of June 21st I wrote you accepting your offer of the 10th inst.

Since then, however, changes materially the features of our agreement. The prospect you held out to me in former letters of a chance of getting some additional little salary from the garden, now vanishes altogether; and the expected time being given to herbarium work, which I thought of turning to some profitable use, will now be required for work in the garden.

Under these circumstances it seems to me that I may employ my time here as profitably in improving my home, although the profits flowing from it may not be so apparent within the first few years.

This view presented, I stands I would, if you still will accept it, and in doing so you will not be embarrassed (~~in~~ having found some one else to take the place) I hope I will lose none of your good will towards me.

Digitized by Harvard University

The desired number of Hieracium longipilum I shall try to collect if they can be found in this neighborhood.

Respectfully and truly
Ever Yours

A. Fendler

Prof. Asa Gray M.D.
Cambridge
Mass

Allen in, St. Louis Co, Mo.
July 9th, 1865.

Dear Sir:

Your letter of the 2d inst. I have been received, and in reply to it I wish to say that, considering the very favorable proposition therein stated, I have again made up my mind to stay for 6 months, from the 1st of September 1865 to the 1st of March 1866, at an arrangement with you on the agreement contained in the above letter. Will you provide room, board, lights & fuel (you to furnish stove) and a monthly pay of $30. So, if nothing serious occurs, you may expect me at Cambridge about the 1st of September.

I think I may be able to manage to get away without any advance in money. If the rail road tickets from St. Louis to Boston, you want to provide, would be very acceptable and be thankfully received, but I refrain from expressing an urgent wish in this matter.

Respectfully and Truly
Ever Yours
A. Fendler.

Prof. Asa Gray M.D.
Harvard University
Cambridge
Mass.

Gray Herbarium
Harvard University

Allenton, March 16th, 1866.

Dear Sir

Your paper of the 5th I received on the 14th, while Mr. Meehan's letter written on the same day with yours, reached me on the 9th, and in which he says that he directed the publisher to send me regularly the numbers of the Gardener's Monthly. Accompanying his letter he sent me a little package of his seeds a Glaxinia & Gloxinia for trial in Missouri.

Many thanks to you for thus having recommended me to Mr. Meehan, but whether I shall be able to fulfill his expectations as a contributor may be rather doubtful.

I am also obliged to you for the record of the weather of the 27th & 28th of February.

The climate here in Missouri seems to consider me as a newcomer, does not yet agree with me, and perhaps, will not change its sulky mood until I have had the care of the weather for some time. We ~~have~~ had cold rains and cloudy skies for nearly the whole time since my return from the East, and I have not got over my cough yet, although I am much better.

Gray Herbarium
Harvard University

The feeling of independence, I enjoy in managing my own grounds, is sometimes mingled with a desire of being near you, as I have been so much accostumed to your presence and your agreeable and intelligent conversation.

How well the soil of my clearing is adapted to the growth of peach-trees is indicated by the fact that some of them: one year from the bud and two years from the seed, have attained ~~two~~ a diameter of 2 inches and a height of 8 to 9½ feet and look remarkably healthy.

The pressing work on hand in my clearing leaves me no leisure hours for the further developement of my new theory or even for reading scientific works. So I have to defer the culture of science a little longer.

Respectfully & truly Yours,

A. Fendler.

Prof. Asa Gray, M.D.
Cambridge
Mass.

Allenton, St Louis Co. Mo.
April 2d 1866.

My Dear Sir

Welcome, if ever, have I received a letter conveying to me such a lasting source of gratification as yours of the 24th ult., containing photographs of two men who stand among the highest in our country. To enjoy their friendships and confidence any one may well be proud of, as I certainly am.

In the evenings of our coming home Agassiz and Dr. Torrey's features will be often contemplated and your friendships be fondly remembered by one who shall always remain

affectionately and truly
Yours
M. Fendler

P.S. I have ~~sent~~ this day sent my photograph to Dr. Torrey.
The weather, at last has assumed mild features, the skies are bright again, nature begins to smile in her beauties of Spring, and "Spring-Beauties" begin to bloom.

M. F.

Prof. Asa Gray, M.D.
Cambridge
Mass.

Gray Herbarium
Harvard University

Allenton, St. Louis Co., Mo.
August 21st, 1866.

My Dear Sir,

Having planted more tobacco than I can well take care of, and having my hands full with building barns and fences I can find but very little time for letter writing or any other writing. On the 12th of June I received a letter from Colonel Alvord together with a copy of a memorandum, how to make observations on the compass-plant. The Colonel requests me to notice the position of the leaves of that plant. On one of my hills I found 14 young plants of which I measured the angles the leaves make with the meridian. The results of my investigations I sent to the Colonel, and have not heard from him since.

Of the 34 leaves examined on the hill eleven were in the true meridian, one was due E & W, and but 3 deviating more than 25 degrees from the true north & south line. Two thirds of the whole number of leaves formed angles less than 10 deg.

Gray Herbarium
Harvard University

One plant, shaded more than any of the other specimens, had both its leaves due N.

On the 29th ult. I measured some of the leaves of my Shiraz Tobacco plants raised from seeds kindly furnished by you. Leaves of 22½ inches by 16 inches, 23½" by 15" 24" by 15" are not rare. I find many well marked peculiarities, distinguishing the Shiraz at once from "Prior's Yellow", the kind most generally cultivated here. Shiraz stands the sun and drought much better, keeps its leaves erect, which feel like parchment. It does not sucker so much as "Prior's Yellow", and ripens more slowly. What position it will take in a commercial view I cannot say, but hope to find out in 5 or 6 months from now.

What is the size of your largest leaves of Shiraz in your garden?

Your herbarium cases must have filled up rapidly by this time. How does your new gardener suit? and how is Mr. Mann getting on?

~~Hh~~ Always hoping for more leisure at some future day, I have no clear idea when that day will come. Time flies fast with me, and another year has gone since my journey East, and yet I long to take up some interesting points in natural philosophy and meteorology. To do this I have to be posted with regard to the latest advancing steps in those sciences. But how difficult will it be to get at the sources of information in a wilderness like the one I live in.

And although I enjoy so much the independence and the wild scenery of this my lonesome woodland home, yet a curious and restless desire, to see the fog a little more dispelled that veils the mysteries of the relation between force and matter makes me feel somewhat envious of the good fortune of those individuals located in the vicinity of institutions like that of Cambridge University Library.

Respectfully and truly
Ever Yours

A. Fendler.

Prof: Asa Gray M.D.
Cambridge
Mass.

Allenton, St Louis Co. Mo.
October 5th, 1866.

My Dear Sir

I am much obliged for your botanical notes from the American Journal of July and September. Did I receive several articles highly interesting to me, especially so is that beautifully written notice of the life and works of the late W. H. Harvey.

In the change in the direction of branches caused by low degrees of temperature I hope, I shall be able to make some observations next winter.

Enclosed I send you some seeds of the "Shiraz", or as you call it in your last letter, "Shirza" Tobacco. I also send you a piece of the dried leaf. In very dry weather the leaf has to be kept in a damp place before it can be handled without breaking.

and happy life yet, full of all the sweets and blessings that this imperfect world of ours has to bestow upon mankind.

Respectfully and truly
Yours
H. Fendler

Professor Asa Gray M.D.
Cambridge, Mass.

Gray Herbarium
Harvard University

Some weeks since I received a letter from Brig: General Atwood, requesting me to make some more observations on the compass plant, but they were all withered on the dry hill or destroyed by cattle. The one transplanted into my garden is green yet, but of very slow growth, the leaves have kept their N. & S. position unchanged.

On the 25th ult. I gathered on the same hills Liatris scariosa, flower spike 18 inches long. All the leaves on the tall stalk of this plant were uniformly twisted half way or 90 degs. around from right to left or against the hands of a clock, so as to bring their surfaces into vertical planes, the latter having the stalk for an axis of intersection, while the base of each leaf kept its horizontal direction unchanged. Is this a common property with Liatris scariosa? I think I have noticed the twisted leaves in collecting the plant many years ago, but never paid any further attention to this curious fact.

I am glad to hear that changing gardeners has been to your advantage.

The first good fruit from my new clearing I had this fall, 76 bunches of grapes from one Catawba vine planted in the spring 1864.

Not long since I sent Mr. Meehan a few notes on a big tree growing near lake Valencia, Venezuela. A few days ago he wrote me that he had enjoyed your company at Cambridge, and that Mrs. Gray has been dangerously ill, but is recovering.

It pains me to hear that Mrs. Gray has been suffering. I hope and wish from the depths of my heart that she may have recovered by this time, and may soon be in the full enjoyment of health and strength. May her's be a long

Gray Herbarium
Harvard University

through the summer season, in many different places about my premises. In [illegible] late they put [illegible] Sprouts which, when raised late in the season, gave rise to diminutive stalks not over than two or three feet high. And among these it was that [illegible] [illegible] [illegible] some of them.

Our spring time was like yours, very wet and backward. March especially was uncommonly cold, its mean temperature being [illegible] degrees lower than that of February. On the 24th of March we had [illegible] degrees below zero, which in connection with the sleet killed more than two thirds of all our peach buds, those spared by the frost [illegible] a few days ago. Snow did not trouble us much this winter.

I was lately offered 130 dollars by the editor and publisher of the "Rural World" of St. Louis, if I were to write a series of articles for a number of this [illegible]. The very first article [illegible] [illegible] [illegible]

[illegible]

[illegible] we find in [illegible] the improving our little estate and to make it more and more comfortable and pleasant, a more than counterbalancing all toils and hardships; and the hope of soon realizing the fruits of our labor [illegible] and the [illegible], the [illegible] and [illegible] stimulating, urging us on to renewed exertion and keeps up a buoyancy of spirit. Only [illegible] things are wanted to make me quite contented; the one being a little more capital to carry out my plans of improvement.

Please give my best respects to [illegible] Gray.

Hoping that this line may find you in renewed strength and good health I remain

Most respectfully and truly yours

A. Fendler.

Prof. Asa Gray LL.D.
Cambridge
Mass.

Clarens, St. Louis Co., Mo. Octr. 28th 1867.

Dear Sir,

The letter of the 17th of last month addressed to Mr. Gray you will have ere this received in due time.

I am delighted to learn from Dr. Engelmann that Mrs. Gray's health was improving at the time the latter wrote you, and that your visit, and the trip, is likely to be productive of benefit. Mr. Darwin's work, I suppose, was welcome, and you have very probably gone over its contents. I cannot however, but wish that pieces of this character, if you have any inclination or time for it, to review, and it would give me delight to see your criticisms. I would ask you to be so kind as to send me a set of the same, which will make my volume of 1863 more complete. The Darwin-Wallace I suppose you omitted, because it would have increased the size of the volume too much.

I am still plodding away in my rural occupations without being any chance for much leisure. I have, however, managed to write a few articles for the "Rural World", for which I received fifty Dollars not long ago. Nothing more is coming to me

by this time.

On the 11th of September St. Louis was honored for the first time with an assemblage of the American Pomological Society. Several of my Eastern friends were there, and I regretted very much not to have been able to attend in person. Thinking that I ought to participate in their laudable proceedings anyhow, I sent an essay on the cause and nature of grape-rot which was accepted for publication in the minutes of the society. The Reviewer, in speaking of this essay in the Gard: Month: for Octbr: p: 313, has been rather generous in his remarks.

Allow me to direct your attention to a point in vegetable physiology which, as far as I know, has never received its proper share of discussion, namely, to the disastrous influence of excessive atmospheric humidity upon the health of plants.

I find that even among learned men there exists a misconception with regard to the pressure of the invisible vapor of the atmosphere. They seem to cling to the old theory that aqueous vapor presses only in cooperation with the atmosphere, as if it were dissolved in the latter and could not act independently. That this is an error you are, no doubt, fully aware of. It can easily be proved by permitting a drop of water to ascend through the mercury of a barometer tube into the vacuum, when instantly its pressure will be evident by its lowering the mercurial column. The warmer and the nearer to the point of saturation this vapor is, the greater its pressure upon the mercury. On the 3d of July last the pressure of atmospheric vapor here at Allenton amounted to one inch of barometer pressure. At times in January it amounts only to two of an inch.

In this connection I may mention another fundamental truth generally not well understood, though proved by Berthollet namely: that any vapor when free (not inclosed in vessels) can be repressed, or counteracted in its pressure, by no other gas or vapor but by that of its own kind. Hence if the atmospheric aqueous vapor presses with a force equal to one inch of mercury and the aqueous vapor contained in the interior of a plant growing on dry soil, presses only with a force of 1/2 of an inch, it is evident that the atmospheric vapor from the outside will be forced into the interior of the plant through its pores and stomata. Is not this reversed direction of vapor in its course through the cells and tissue of plants to be considered as detrimental to the elaboration of healthy juices and the formation of vegetable products?

(From page 101 Amer: Journ: of Sc. & Arts it seems that Mr. Wrana has at last carried his point against everyall.

We had here this summer one of the most severe and protracted droughts ever known in this region. It has not yet ended. Springs are drying up all over the country. ~~and for bl~~ It is strange to say, in the midst of this drought, a steady and briskly flowing spring appeared on my land in a place hitherto only somewhat moist. The new spring is above my house, about 60 feet higher, on the steep slope of a dry hill.

this year, although we have had not much for sale, yet we enjoyed a continued round of fruit-gathering. First strawberries, then currants, next raspberries, blackberries, then grapes and finally early and late peaches.

The leaves of the forest trees are falling fast all around, yet the weather is beautiful and mild. We have had so far only one severe white frost this fall.

Please remember me kindly to Mrs. Gray.

Respectfully and truly

Your friend.

H. Shendler.

Gray Herbarium
Harvard University

1708 Gilpin Av., Wilmington, Del.
Novbr. 13th, 1874.

Dear Sir,

Mindful of the many proofs of your kindness towards me, and as a token of my high esteem, I have this day sent to your address by mail a copy of the little volume which I mentioned in my letter of July 23d. It has just come from the hands of the binder.

Although you are, no doubt, as fully and deeply engaged in botany as ever, I nevertheless cherish the hope, that your well-known ability with regard to philosophical inquiries will not let you lay this little work aside without first having given it a patient examination. The new views therein unfolded are the result of an ardent and persistent desire of satisfying as much as possible my own mind as well as the minds of others, with regard to some of the highest and most important problems that men

of intellect have proposed to themselves for solution. Your wide reaching influence can do a great deal in the way of making the existence of the book known to your friends. I would be very thankful for any efforts of lending a helping hand for the diffusion of the book now on sale. I will send it postpaid to any address in the United States, Canada, England, and Germany, on receipt of two dollars. I have a lot of printed circulars on hand, and need only the proper addresses to distribute them where they may be most welcome.

I have bought me a little dwelling house and lot, as I intend to make Wilmington my home.

Respectfully and Truly
Ever Yours
H. Pendber.

NOW READY.

ILLUSTRATED WITH LITHOGRAPHS.

BOUND IN CLOTH, 8VO., $2.00.

To be obtained DIRECT *from the author,*

AUGUSTUS FENDLER,

WILMINGTON, DELAWARE, U. S.

Please remit price of book in Post Office Money Order or, where these cannot be obtained, in Registered Letters.

The book is replete with original conceptions and new ideas concerning the most important topics in physical science. It analyzes things that, so far, have been considered as absolutely simple and ultimate. It points out the cause of gravitation, and of molecular repulsion; the nature of heat, light, magnetism, chemical affinity, and muscular energy; the source of heat in the sun; and the three ultimate primary powers that are at the bottom of all phenomena, of all motions, and of all the mechanical work done in the universe. It contains sketches of the probable state of the *pre*-phenomenal and of the development of the phenomenal universe. An answer is also proposed to the question that is repeated by every searching student of nature with regard to the economy of the universe, viz: what becomes of all the immense stores of heat continually emanating not only from our sun, but from millions upon millions of similar suns, called fixed stars. It treats of the constitution of the sun, the conservation and correlation of forces, and their conversion of one mode into another, and deduces the impending fate of all celestial orbs.

An attempt is also made of conveying to the mind of the reader a definite idea and a more substantial conception of what has generally been indicated by a mere name, such as "Supreme Being," "First Cause," &c., and of delineating what has been styled "the greatest mystery of the universe," enveloped according to some, in a flood of light, according to others in impenetrable darkness.

This little work may be recommended not only to the more philosophic of naturalists and physicists, but also to those speculative philosophers who are conversant with science, and to minds of intelligence generally, who are in search of the ultimate causes of nature; all will find in these pages abundance of material for reflection.

AUGUSTUS FENDLER

Wilmington, Delaware.

Letters 41-45

Missing From Collection

612. Jefferson str. Wilmington, Del.
Octbr. 28th, 1876.

Dear Sir,

Your welcome letter of August 1st, holding out so great an encouragement with regard to my intended voyage to Trinidad, increased my restlessness and made me wish to start from here at once. But there were some formidable obstacles to be surmounted first before I could go and make Trinidad my future permanent home. One of these was the sale of my house and lot, which in these exceedingly dull times and in the present prostrate state of business stood a poor chance of success. The prospects in this direction were so disheartening that I already had made up my mind to stay here another year, and to await the brightening up of business, when all at once [without my ever having put up any advertisement] a stranger came and bought my house and lot on the 14th of October for 785 Doll: cash. According to agreement I

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Harvard University

gave him possession of it on the 25th of October, and live now again at 612 Jefferson Street.

Thus was removed one obstacle of my going to Trinidad. But there is another one, hardly less formidable, and that is the sale of the remaining copies of my work. It is true, I have made no efforts whatever for the last 18 months with regard to its sale, because I did not know exactly how to go at it. It is not so much the sale itself, but to know the heads and hands best fit to receive it which concerns me most. The mischief is that in the last age we now live in everything else besides matter, although the former can plainly be shown to exist also independent of matter, is at once rejected by scientists, who prefer to be carried along with the prevailing tide rather than to take the trouble of investigating the essence and nature of matter. The strong current of abating for every kind of entity that is not matter will, no doubt, take a more favorable turn sooner or later, but — may be, long after we [or at least the material parts of us] have been mouldering in our graves.

In this regard to the steadily increasing dimness of eyesight of which I complained in my last letter, I am happy to say that by reflecting upon the probable cause of it, I was able to remove the same without the help of any physician or medicine, merely by the application of cold water to the brow and the top of my head, counteracting thereby the effects of an immoderate flow of blood towards the brain.

There are some other minor considerations which are apt to delay my departure from here, and therefore I am unable to designate any special date for it.

Respectfully and truly yours

H. Fendler

612 Jefferson St. Wilmington, Del.
January 26th, 1877.

Professor Asa Gray, M.D.

Dear Sir,

I tried Cassino with regard to the sale of my book, but could effect nothing. I succeeded better with another publishing firm, which ordered 26 copies for sale on commission. The remaining copies I shall leave with our friend, Mr. Wm M. Canby. My intention is to leave here for Trinidad if possible about the end of February, before the equinoctial gales set in, if I can find a vessel bound for Port of Spain, which seems to be rather "few and far between".

In one of your letters, in which you advise me to let you know when I would be ready to go, you were kind enough to offer me Grisebach's Flora of British West Indies, which includes Trinidad, 1 vol. 8vo", but you did not say on what conditions. Thinking that I can profitably employ some of my present leisure hours in the study of the volume just mentioned, I should be very glad and thankful to get it any time you may deem proper to send it.

Happening not long ago to read a controversy between yourself and Meehan with regard to the insect-agency in fertilizing plants, I

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Harvard University

became all at once conscious of how much I lost by neglecting to make experiments during my stay in Venezuela with regard to the numerous apple-trees then growing on my place in Colonia Tovar. These trees presented the remarkable peculiarity of bearing seed-less apples. Why they should do so seems pretty clear to me now when I take into account the following circumstances. In the first place the air at Colonia Tovar is, where I used to live, exceedingly damp, and thus might have kept the pollen very moist and sluggish; 2d, there never occur any violent winds, no gales, nothing but gentle currents of air not strong enough, during my four years residence there, to disturb the loosly hung up shingles of the roof of my cabin; 3d, there is comparatively speaking, a great scarcity of insects, especially such as are apt to visit the flowers, and I never saw any bees or other insects working at the apple blossoms. True there are plenty of other species of trees and plants that bear seeds, but whether they are frequented more than the apple-trees by insects I do not remember. O, what an opportunity did I miss to investigate these interesting questions, as I might have tried to fertilize artificially some of the apple-tree* blossoms, in order to see whether they would have seeded or not. Not a single seed could I ever find in all my apples. The trees were very much given to sprouting from the root, which furnished a ready means for propagation. May these trees not have sprung from seed-bearing specimens brought from dryer, more stormy, and more bee-enlivened regions? And would an apple-tree if taken from the United States and transplanted into the soil of Colonia Tovar cease to be seed-producing, and assume the habits of those found there now, producing on one and the same tree apples of all shapes: globular, oval, elongated, depressed, tapering, irregular with ridges, small, large, middle-sized, striped, not striped, some on long slender stalks, others sessile, some single and separate, others crowded in clusters, &c. puzzling and defying, I dare say, the pomologists endeavors to establish well-defined varieties.

Yours very truly

A. Fendler.

Wilmington, Del: May 6th, 1877.

Professor Asa Gray

My dear Sir,

I have just recovered strength enough to write my first letters after a time of most distressing pain and suffering. In the first place let me thank you and Mrs Gray for the kind sympathy you expressed for me in a letter to Mr. Canby which he read to me. My recovery has been so slow that I, as yet, feel hardly strong enough for all the troubles incident to a breaking up of a settled condition of life, for the bustle and din of New York, and the embarkation on board of an ocean steamer. Yet when I see tree and shrub hastening to clothe themselves in their garb of green and adorn themselves with a thousand flowers I am getting impatient, and long to be out in the woods of some tropical mountain-region. I have therefore made up my mind to leave Wilmington ~~to-morrow~~ on Tuesday morning and New-York on the 10th, to go per steamer "Canima" to Bermuda, from there to St. Thomas by another

steamer, and thence to Trinidad by a third one. I shall try to write again on leaving New York.

Yours very truly

A. Fendler.

Gray Herbarium
Harvard University

Port of Spain, [illegible] 17th 1877.

[illegible]

[illegible] as

[illegible] time [illegible] going by the [illegible] route to [illegible], you will probably [illegible] the time [illegible] the expense [illegible] the time required was not less than 23 days, the time it always required [illegible] the expense [illegible] vexatious delays in transfers and stoppages connected with this route of travel, which are accomplished by me in not less than [illegible] six days. The first one from this port to [illegible], the second from [illegible] to [illegible], the third from [illegible] to [illegible], the fourth from [illegible] to Port of Spain. The fare for passage in the second cabin from [illegible] to [illegible] is [illegible] each [illegible] [illegible] to [illegible] 30 [illegible], always payable in gold. The hotel bills [illegible] at [illegible] dollars per day, so that the whole expense for both of us long brother and myself, besides the [illegible] economy, amounted to $ 247.00 in gold, from the time of our [illegible] in [illegible] until we arrived at Port of Spain, [illegible] days' stay at a hotel in the latter place. Board at this last hotel was [illegible] $1.50 per day, [illegible] board, all of all proportions, so we sought, found, and rented a house in Bell-Mont village, about 2½ miles distant from the most busy part of Port of Spain and from the Post-office. Bell-Mont is said to enjoy

[illegible]ray Herbarium
[illegible]vard University

a healthier situation [illegible] less [illegible] [illegible] [illegible] the cheery smile [illegible] [illegible] [illegible] [illegible] of [illegible] of pain [illegible] [illegible] [illegible] [illegible]

Grey Herbarium
Harvard University

[illegible] late beginning of growth and the [illegible] [illegible] [illegible] since passed. May your life and health be spared for many more years to come to the benefit of [illegible] science and the [illegible] of [illegible] disciples.

[illegible] farewell. [illegible]

[illegible]

Yours faithfully

[illegible]

[illegible]

My dear Sir

[illegible]

[illegible] ... I am happy to hear that your [illegible] ... [illegible]

[illegible]

[illegible] of December. I think it best [illegible] sets before Christmas because spreading [illegible] and exposing the plants to

. . . God help the friendless botanical collector [illegible] comes to these shores. Not enough that he has to swelter under a scorching sun at one time, bear torrents of rain at another — not enough that he has to get up and climb rugged mountain sides amidst ~~the~~ most dense and thorny undergrowth when other people enjoy a sweet repose in bed — he must still be defamed for all his toils and sufferings by a venomous rabble. Drenched with rain and fatigued he comes towards evening home with his load under his arm, manages with difficulty to dry the specimens, fights continually against the ravages of insects and dampness, the white ants a few weeks ago got into one of my cases and destroyed the greater part of a valuable book, and if I had not from time to time looked after them, their work of destruction would have been still greater; — and in connection with all this he has to endure the badly suppressed scorn of ill-regulated superstitious beings. Having braved all, there remains still the risk of shipping his accumulated treasures of plants, and he must consider himself lucky if his collections reach their place of destination safely. Thus far my expenses of living have been greater than I anticipating, and my little capital is shrinking fast away.

[illegible] hopelessness, or illness of mind will be good, and I am resolved to go up the stream, hoping to get in sooner after a while. Time may perhaps brighten again the days for me and bring me more cheerful light.

The bark Bessie Simpson will go out tomorrow.

I am very glad to hear that you are all well and healthy, wishing from the bottom of my heart that God may continue to bless me, that I may continue to dwell with you and yourself.

[illegible]

[illegible]

Gray Herbarium
Harvard University

Near Port of Spain
April 26, 1855

[illegible]

The box contains 50 sets of Ferns, each set forming a separate package with the number of the set and the number of specimens it contains marked on the [illegible] 1 to 5. [illegible] sent to our friend Cunday. There is but little difference in quality between the different sets, except that the first 6 or seven may have somewhat larger specimens, especially sets No 1 and 2, which [illegible] upon the other numbers, except 4 & 5, [illegible] the best, [illegible] the most [illegible]. All the sets have [illegible] 12 to 45 inclusive, or from 25 specimens [illegible] and 44 contain 27. [illegible] 45 & 46 contain 31, [illegible] 43 & 44 - 73, and [illegible] 50 [illegible] for [illegible] [illegible] have [illegible] [illegible] [illegible] [illegible]

[illegible] the first rainy season [illegible], continuing for two days. The [illegible] lasted from [illegible] April [illegible] considered by the natives [illegible]

[illegible]. The heat, [illegible] April and [illegible] [illegible] and [illegible] [illegible] ridges, where many [illegible] [illegible] had lost the great [illegible]. [illegible] banana [illegible] [illegible] crisp [illegible] [illegible] flowers, [illegible] [illegible] [illegible] complete [illegible]. [illegible] gain. [illegible] rare; even the cultivated ones out- [illegible] are flowerless [illegible] dead from the [illegible] of the extraordinary drought.

[illegible] favorable [illegible] climate, [illegible] soil and the luxuriance of vegetation of this [illegible] in general, [illegible] speak so well as to the majority of its inhabitants and their manners. [illegible] more [illegible], prejudice superstitious set of individuals I have never [illegible] [illegible]. [illegible] kind of people I [illegible] to deal with will [illegible] very mortifying incident. Little did I think when I wrote my [illegible] (and about the time I was [illegible] to make [illegible] comfortable) with what suspicion I was regarded and what kind of disagreeable experience was in store for me. [illegible] [illegible] while I was busily engaged distributing plants, and my brother working the soil [illegible] preparatory [illegible] planting, [illegible] officers and detectives headed by a [illegible] of the police pounced suddenly upon us, and after reading to me a warrant in which I was [illegible] suspected and accused of coining counterfeit 5-[illegible] pieces began searching the whole [illegible] premises [illegible] [illegible] [illegible] [illegible]

[illegible] search had taken place, and I should never be disturbed and molested again. He gave no details [illegible] [illegible] [illegible] strangers, our secluded kind of life [illegible] [illegible] the supposed absense of evidence [illegible] [illegible] [illegible] the suspicions of the neighbors upon us.

[illegible] [illegible] spread [illegible] representatives [illegible] — love to dwell [illegible] accusations [illegible] but are silent about the exoneration. [illegible] [illegible] search took place, [illegible] women, [illegible] could be seen to turn up their eyes [illegible] [illegible]. A great many [illegible] Clear [illegible] [illegible] was [illegible] people [illegible] among the more enlightened [illegible] [illegible] of brown paper to the sunshine [illegible] [illegible] search seems to have [illegible] [illegible] people before [illegible]

[illegible] Springfield, [illegible]
[illegible] 15, 1875.

[illegible]

[illegible]

Dear Sir: [illegible] the pitiful tale of [illegible] received by me, [illegible] from the [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] and in good condition [illegible]

[illegible] [illegible] [illegible] [illegible] [illegible] [

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] "[illegible]

[illegible]

[illegible]" [illegible]

[illegible]

I was not allowed to deliver to any [illegible] the

[illegible] already [illegible] was [illegible]

[illegible] and most [illegible] of information [illegible]

[illegible] else. [illegible] offered this [illegible]

[illegible] the [illegible] of police and also

told him that I was with him [illegible]

[illegible] was [illegible] could

[illegible] letter held in my

[illegible]. Nothing less than a personal

acquaintance with the chief of police or one

of his officers or some influential person close

at hand on the spot, could have prevented the

search, for there was no time to be lost in

such an important business. I can say

if it had been known that Prestoe and the

[illegible] were my friends I would have been

[illegible] up too. To show how [illegible] Prestoe him

self is [illegible] the [illegible] of

living in my neighborhood I need only mention

that he was [illegible] and even had stones

thrown at him by the crowd while riding

once on horseback [illegible] the district.

This Mr. Prestoe told me himself.

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] was, in [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

A. [illegible]

[illegible] defendants' [illegible]
dies [illegible] 6th 1818.

[illegible]

[illegible] letter of [illegible] 5th
[illegible] doubt have reached in due time.

Gray Herbarium
Harvard University

[illegible]

[illegible]

[illegible]

Port of Spain, Island of Trinidad, W.I.
Feb. 6th 1878.

Professor Asa Gray

My Dear Sir,

[illegible] yesterday [illegible] "have past" which I suppose [illegible] me letter of [illegible], for I sent [illegible] letter on eighth 24th.

[illegible] "[illegible] will [illegible]", coming as it did, quite unexpected, caught to cool me [illegible] for collecting, flowering, particular, and I had hardly [illegible] soon a somewhat discouraging [illegible] of [illegible] after having collected already so many of the other kind of plants. I think, however, there can be no great risk in making up eight sets, one for you, one for myself, and six sets for [illegible].

As to Lichenes and Mosses I have so far not, at least in the less elevated regions, with no great success, hope however to find the higher mountains more remunerating in this respect.

It seems that I am getting gradually a little stronger and in better health, and I am just beginning again to enjoy life in the presence of so many [illegible]

Gray Herbarium
Harvard University

ful objects of this magnificent trop-
ical vegetation, though at the same time
I cannot fail to be impressed adversely
— not to say disgustingly — with the sur-
rounding [illegible] warm & human-
ity. Trinidad newspapers are not much read
here, and no wonder, when a small
weekly sheet [illegible] the standard
of a Wilmington one [illegible] papers] is
sold at 10 cts a copy.

During the month of October and the
latter part of September we have had
no superabundance of rain. This
period constitutes the "Indian Sum-
mer" of Trinidad, which, however, is
now at an end.

In my last letter of Septbr. 24th
I mentioned that the best way of remitting money
from the United States to Trinidad
would be a draft on London.

Hoping that you are in good health
and prosperous in all our endeavors

I remain

Very cordially & truly
Your friend

H. Fendler.

Port of Spain, Island of Trinidad, West Ind.
Nov. 15th 1858.

Professor Asa Gray

My dear Sir,

Your valuable letter of Octbr 31st enclosing a bill on London for the amount of £2. 19. 11 and Prof. Eaton's printed list of my Ferns came to hand two days ago. I hasten to acknowledge the receipt of both, and to thank you most sincerely for all the trouble and inconvenience you have taken so disinterestedly upon yourself, in order to smoothen the rough and declining path of one whose weak point it may be said to be his love of rambling evermore through the wilds of Nature's fair domain, and who sees in you the most steadfast friend he has.

I was told that in selling the draft I would get only $4.80 per pound Sterling from the Colonial Bank here, though in selling the same bank asks $4.90. I have tried some of the merchants and succeeded at last to get $108.00, which is at the rate of a little more than $4.90 a pound Sterling.

Mosses & Hepatics I have been able to collect to some extent, and hope to meet

Gray Herbarium
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with better success as the season advances. Lichens seem to be more rare. I am glad to hear that Mr. Lame is still alive and engaged in botanical labors.

With regard to flowering plants and Ferns I have been at work as busily as ever, and in the coming dry season I intend to visit the more remote regions ~~of~~ of the Island. Mr. Prestoe has been to the Top of "Tucutche" some years ago; he may be ready perhaps for another ascension by the time I intend to explore it.

I am glad of having received a copy of Prof. Eaton's list of my Ferns. I have this day written to him thanking him for his well-timed remarks with regard to the good condition of the specimens of these sets. I would like to have another copy of the printed list.

The coffee crop is coming in slowly and sells at 24 cts. a pound in the shops. Oranges begin to ripen; yams will be ready in December; plantains sell now 3 or 4 for 5 cents, some weeks back even as high as 4 for 10 cts. Great quantities of what are called "provisions of the ground" are imported from other Islands and the neighboring coast of Venezuela. The number of inhabitants of the whole Island of Trinidad is about 110 thousand. Sickness has prevailed during the last two months to an unusual degree.

Both of us, my brother and myself, enjoy pretty good health at present.

With the best wishes for your health and prosperity I remain

Cordially and truly

Your Yours

H. Fendler.

P.S. The merchant who bought the bill on London wishes me to request you to send me the "Second of Exchange", so that I may give it to him. I am not sufficiently (posted) in financial matters as to judge about the propriety of this request.

H. F.

Port of Spain, Island of Trinidad, West Ind.
April 24th, 1879

My dear Sir,

Your letter of Feb. 10th enclosing the £2 of Exchange I received on the 20th of January. It was a strange slip of the pen when in my last letter I acknowleged £2 instead of 21, and might have led to a serious loss if it had occurred in a more important connection. Following your advice I have written to Sir Joseph Hooker under date of Febr. 26th, asking him to what extent phænogamous plants I may collect, and informing him of my desire to send part of my collections direct to him. I also gave an account of what I was doing in the way of collecting specimens. As yet I have received no answer from him.

Meanwhile I have been hard at work, have undertaken more extensive excursions into the interior, finding many interesting phænogamous plants as well as several strange looking Ferns new to my collection. Striving to take advantage of the present dry season and to make long excursions I have not had time to arrange my Ferns into sets, and before doing so should like to add

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more to what I have got.

It afforded me much pleasure to find that the low moist woods of the central part of the Island are much richer in Mosses than other parts heretofore visited. I have collected many, but shall endeavor to collect more, and to send them together with the next lot of Ferns. Lichens, however, are scarce. My latest excursions have been 26 miles to the East of Port of Spain; if I can I shall go a little further to the N.E. To lie out in the damp woods is not very agreable to one who is subject to rheumatism, and hospitality one seeks in vain [even with regard to a nights lodging] among the few inhabitants of these regions, unless one gets among men of the Spanish race. So these excursions are made under many disadvantages and even danger, for the region alluded to is well stocked with the much dreaded Coral-snake, one of the most venomous reptiles. Not unfrequently we hear of people having died from their bites.

My health is about as good as I can expect, but my eyes are rather failing and give me trouble on this account.

The crop of our little garden turned out pretty good, one of the orange-trees giving us 1006 oranges, and plantains and bananas ripen in succession. My place, however, is too small, and a bigger one of equally fertile soil and as conveniently situated as the present one is hard to get.

The rainy season is near at hand, hence I have to hurry up with my excursions.

Hoping to hear from you soon, and that you are all in good health

I remain Yours

Very Truly

H. Fendler.

Port of Spain, Island of Trinidad,
West Ind. Octbr. 22d, 1879.

Professor Asa Gray.

Fendler

My Dear Sir,

Never did I receive in one day so many friendly letters as on the day I received Yours of the 17th and the 20th Septbr. full of kind words and encouragements. Many thanks for the First and Second Bill of Exchange for £8. 16.0 which I found enclosed in your letters, and which I sold as usual at the rate of $4.85, receiving $42.68.

Up to the latter part of Septbr we have had very wet weather, and just at the time when a dry spell, the so-called "Indian Summer", which usually begins with the first of Octbr, was about to offer a new chance for collecting, Mr. Prestoe, the Government Botanist, whose Clerk had left him, requested me to accept the situation thus made vacant in his office, for three months, ending with December 1879, when he hoped to get some one else to relieve me. Not being flush of money and desirous

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of rendering some assistance to Mr. Preston who befriended me heretofore, I accepted the offer. Under these circumstances I shall scarcely be able to do anything in the way of collecting plants until the dry season is fairly setting in, when I shall endeavor to collect and distribute as much as I can, so as to have the sets ready for shipment by May 1880. The Mosses and Lichens I intend to send on at the same time. I am glad to hear that the naming and distribution of my Venezuelan Mosses has at length been undertaken.

I am much gratified to learn that Dr. Engelmann's visit to the shores of the Atlantic has been highly beneficial to his health and strength and that he seems to take a cheerful view of life again.

A short time ago I was informed by our good friend Canby of his pleasant trip to the North Carolina mountains. From the account he gives of the excursion I am happy to see that Mrs. Gray, having recovered from her late illness, was one of the party. Please remember me kindly to her.

I remain faithfully & truly

Ever Yours.

A. Fendler

of the serpent's embrace to a length of seven feet. ... The body was brought to the Police Station of Arima, for inquest before burial."

My health has been pretty good with the exception mentioned above. I shall write again to you soon after having shipped the box.

Hoping that this letter will find you in good health and happiness

I remain Yours
faithfully & truly
A. Fendler.

Prof. Asa Gray, M.D.
Cambridge, Mass.

Port of Spain, Island of Trinidad, W.I.
May 26th 1880.

#50

My Dear Sir,

My last letter to you was dated Octbr. 22d 1879. At that time I was full of hopes and aspirations as to what I was going to accomplish during the coming dry season of 1880 — i.e. from January to the end of May — in the way of exploring new regions and collecting rare plants. But I was sadly disappointed in the main feature of my expectations.

A more dismal, wet and drizzly period I have never seen in any other part of the tropics than the one here during the latter half of Decbr. up to the 25th January, the latter half of Febr. middle part of March and nearly the whole of April. Trinidadians say they have never experienced any thing like it. Compared to this depressing spell of weather, the regular rainy season may be called very pleasant indeed. Not only was I prevented from going abroad, but also from distributing the ferns already collected, into sets, for fear of spoiling the specimens by the damp atmosphere. And when, some six or seven weeks ago, I had become impatient and tired of inactivity and ventured on an excursion I got very wet and contract-

ed a severe cold, which gave rise to an ugly and painful Tumor in my face and laid me up for several weeks. As soon as I got well the rainy weather set in again, as if determined to make me stay at home. I managed, however, to visit two remote places which I had not seen before.

Making good use of the intervening dry days I succeeded in putting the Ferns I had on hand into 50 sets. Set No 1. contains 68 specimens, the other sets tapering down in number of specimens, so that the last five sets contain 25 specimens each. No 5. I wish to go as a present to our friend Canby.

The Ferns are all boxed up, together with four packages of Mosses and Liverworts and one of Lichens, besides Wright's copy of Grisebach's Flora of the Brit. W. Ind. I have also in accordance with the request of Professor Eaton written some notes on the Ferns of Trinidad, and put them in Grisebach's book. With regard to the latter I shall address a few lines to Mr. Wright. I have added also 4 Top-pieces of Fern-Stems for Prof. Eaton. The box was not large enough for bigger Stems.

I intended to send the box direct to Boston by sailing vessel, but could not do so; and shall now try to send it with the next New-York Steamer, the "Bahama", which will be due here about the 6th or 7th of June.

Having had last fall a good chance, as an employee to Mr. Prestoe, to become more thoroughly acquainted with his disposition, I found out what a strange kind of man he is, and prefer not to trouble him any further. Hence it is that I have not spoken to him for the last six months.

It is well known that in Trinidad there is no scarcity of serpents; but I was not prepared for the following bit of news, which appeared in one of the newspapers and which happened in a remote district, near a cacao estate hidden and isolated within the depths of extensive low and level primeval forests, where shade and dampness reign forever, and where from time to time I roamed about, and had the pleasure of gathering many a rare fern new to me. "On the 9th Decbr. some men at work in a cacao plantation on the river Mamo, belonging to Mr. Agostini, heard cries of alarm. On reaching the spot from whence the cries had come, they saw a man enveloped in the folds of a monstrous serpent. They were not sufficiently armed, but presently returned in larger number, and with cutlasses chopping the snake through at several of the folds, killed it and disengaged the man's body. The man had been some time dead, and was stretched by the enormous pressure

Port of Spain, Trinidad, West Indies
June 9th, 1880.

Doctor Asa Gray

My Dear Sir,

Under date of May 26th I informed you of my intention to send a box containing specimens of dried Ferns &c. to your address.

Yesterday the Agent here of the Quebec & Gulf Ports Steamship Company took in charge the aforesaid box and promised to have it forwarded to Boston, by the "Bahama", the first Steamer due here in a day or two. The freight, amounting to three Dollars, I paid as far as Boston, and enclose the Receipt for the same.

The contents of the four packages of Mosses and the one of Lichens I did not attempt to arrange, on account of the dulness of my sight.

Trusting that the box will arrive safely and find you in the enjoyment of good health

I remain

Cordially & truly Yours

A. Fendler.

P.S. I have written to Mr. Charles Wright with regard to his book.

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What would have been the result had I complied with my host's invitation to take a little more of that liquor?

Wishing you a pleasant and prosperous voyage to the shores of Europe, and a safe return to your own great and flourishing country

I remain sincerely & affectionately
Ever Yours

A. Kendler.

[illegible] of Spain
[illegible] Island
August 5th, 188[illegible]

[illegible] M.D.

[illegible]

[illegible] of having received your favor of the [illegible] of July and the gift of Exchange as it [illegible] for [illegible] 1890. [illegible] both.

[illegible] the purpose, as Dr. Engelmann writes me, of studying the Compositae, seems to indicate that [illegible] are still blessed with a vigorous mind and a long [illegible] to enjoy satisfactory [illegible] results, as it seems it [illegible] in the highest degree to [illegible] the preservation of good health [illegible] to [illegible] [illegible]

[illegible] health is tolerable and [illegible] still anxious to go on excursions into [illegible] mountainous districts, as soon as the roads and the weather will permit me to do so. The roads in many of these districts are quite impassable in the wet season; but the most health-endangering performance, to me at least, is the wading across so many rapid-running [illegible] along under a scorching sun. With regard

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[illegible] collecting of Ferns I can safely say that many specimen I may gather hereafter [illegible] cost me more time [illegible] than [illegible] is to.

[illegible] while incidental [illegible] to illustrate the ignorance and one [illegible] of the practice [illegible] here.

Having ascended one of the highest ridges of the Saint d'eau mountains, about 10 miles from town I took occasion to visit a man known as "Papa Fernand", though his real name is Joseph Isidore, to inquire of him about a piece of land that was offered for sale in his neighborhood. Everyone seemed to know the man, though his cabin is miles away in the mountains, in an out-of-the-way place. When I at last reached his premises I found no one there, but noticed as something unusual a great number of bee-hives stuck all around ~~his~~ under the eaves of his cabin and numerous out-buildings — his first bee hives I have seen in Trinidad. After a while a woman came up and called aloud Fernand's name, who soon made his appearance. Neither he nor any of his neighbors could speak English, and as I could not speak their language I could not learn much about the land I wished to see. The man seemed however to be courteously disposed. In order to see how the land lies I exposed my little pocket-compass in his presence, when all at once he seemed to become alarmed, and made me understand that he thought that instrument was for the purpose of showing the spot where money was hid in the ground. Of this notion I tried to disabuse him but it seems without success. Not soon after he invited me into his room, and as is customary here asked me to help myself to the small contents of a bottle he set before me, in way of refreshment. Not to show any distrust I poured about two small thimbles-ful of the liquor into a tumbler, mixing it with plenty of water, but became somewhat suspicious after drinking it, on noticing that "Fernand" himself had not touched any of the bottle's contents. About ten minutes later, on my way back, I experienced a strange state of mind such as never before I had happened to be in. There were neither dizziness, stupifaction, nor exhilirating symptoms. Visions and strange incoherent thoughts flashed across my mind continually and vanished at once as quick as they came. Any theme I made an effort to think on slipped from my memory and instead thereof quite a different uncalled-for theme presented itself with the same futile result, until I became freightened at my own thoughts, and horrified at my condition of mind. Meanwhile I had missed my road in the mountains, and it was only with difficulty, in a round about way, that I regained it. After a two hours brisk and steady walk this unpleasant irritation of the brain had gradually subsided, and my mind regained its normal state. This may teach me how to treat refreshments offered by strangers.

the same price.

Having proved yourself always a friend of mine, and ready to help me along in my botanical enterprises, I have no doubt that in the present instance — may be for the last time — you will give some attention to my interests with regard to the sale of these plants and, acting in my favor, try to influence Sir Joseph Hooker to do all he can for me. Does not the British Museum require a set?

Some of the specimens having been attacked by bugs during the time I worked at meteorology in Mr. Prestoe's office, I was obliged to go over them several times, poisoning the flowers and fruits; but it would still be desirable not to let them lie long undisturbed, as some larva may yet hide in them.

Remember me kindly to Mrs. Gray and believe me to be

Ever Yours faithfully

A. Fendler.

Gray Herbarium
Harvard University

Port-of-Spain, Trinidad, West Ind.
June 1st, 1881. #62

Dr. Asa Gray

My Dear Sir,

Your Postal Card of Septbr. 1880 I received in due time. I hope this letter will find you in good health. From Prof. Eaton I have received the cheerful news that the box of Ferns (second issue) had safely reached him; he has sold part of them and hopes sooner or later to sell all the sets of my ferns.

With regard to Mosses, Hepaticæ and Lichens I communicated to Prof. Eaton your urgent wishes of having them sent to Dr. C. Müller; but he thought of sending them to Mr. William Mitten, an Englishman who has published an excellent account of the Mosses of South America and who, I hear, has promised to arrange, name, distribute and sell them for me.

Since my last letter to you I have been employed for about six months, from August to the end of January in the office of Mr. Prestoe, the Colonial Botanist, in computing and bringing out the means and results of meteorological observations taken

at this place during the last 19 years, and bringing them into diagram form. From the end of January up to the middle of May I have been busy in arranging and numbering my phænogamous plants and distributing them into sets.

Up to the end of Novbr. last the weather here was excessively wet, it then turned to be unusually dry and continued in this way to about the 24th of May, when the wet season may be said to have set in again.

In regard to health I have had not much to complain of, but find nevertheless, that a long-continued exposure, for 4 years, to an annual average temperature of 80° F. affects me rather unfavorably, unduly exciting my nerves; and when during the long dry season just passed, the heat of midday grew at times to be really distressing, the thought rose in my mind if it would not be best to choose me a home in the mountainous districts of Jamaica, say three or four thousand feet above the level of the sea.

I hardly think it worth while to collect any more plants here in Trinidad, and will send my collections of phænogamous plants, as you some time ago advised me to do, to Sir Joseph Hooker, Kew Gardens, London, and write to him at the same time.

I have not made more than six sets in all. Set No. 3. our friend Canby will buy, and the remaining five sets I have boxed up and addressed to Sir Joseph. I intend to send the box by next steamer going to leave Port-of-Spain in a few days.

Set No. 1. consists of	10. packages containing		807
specimens, No. 2.	—	5.	642
" , No. 4.	—	4	479
" , No. 5.	—	4	424
" , No. 6.	—	3	365

The specimens are numbered from 200 up to 1028. No. 1 to 200 I have left open for Ferns.

There are many specimens [especially in set No. 1.] which gave me much trouble in preparing them for the herbarium, and on which I expended an extra amount of labor, four or five times as much as is required for ordinary specimens; for instance the Bromeliads, Orchids, Musaceæ, Aroideæ, Palms, some Cæsalpineæ and fleshy Piperaceæ, &c. — Although they ought to bring more than the rest I will let them go at

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Harvard University

lat.

Port-of-Spain, Trinidad, West Ind.
February 25th, 1882.

Professor Asa Gray,

My Dear Sir,

I am very glad to tell you that a few days ago I received from Sir Joseph Hooker a check for £38. 15/- = 186 Dollars as the proceeds of sale of the herbarium specimens I had sent to his care.

Shortly before Christmas he had already notified me of their sale being effected. I thus have got over all my troubles with regard to them, and hasten to thank you also; for, no doubt, by your kind mediation I am much indebted for the success in thus disposing of them.

The year 1881 has been rather a disastrous one for Trinidad. An unusual amount of sickness prevailed here to a great extent, and the

yellow fever in particular claimed many a victim, chiefly from the ranks of the unacclimated Europians. Many people left the island to escape the plague, and business turned to be very dull.

Although not attacked by yellow fever I suffered much from minor disorders which reduced me very much, and terminated into congestion of the liver, speedily cured however as soon as the character of the disease had been clearly determined. Since the end of last month I have been steadily improving, and at present have nearly recovered my usual strength. My brother also has suffered very much, but is getting on pretty well now.

Roses in bloom and oranges ripening fast, though three months later than last year. I am leading rather a quiet life until some new field for exertion may happen to present itself.

Good health, prosperity and long life to you; this is my sincere wish.

Faithfully & truly Yours

A. Fendler.